



EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates: Northing 1027406.49 Easting: 1084478.18
Surface Elevation: 595.04
Casing Below Surface: N/A
Reference Elevation: 595.04
Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: Geoprobe Direct-Push		Soil Boring Number: SB-05
Sampling Method: Sterilized acetate sleeves		Sheet 1 of 1
Water Level:		Drilling
Time:		Start Finish
Date:		DATE: 10-26-12 DATE: 10-26-12
		TIME: 08:15 TIME: 08:27

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions: Athletic Field (Grass, Topsoil)
						Weather: Sunny, 5-10 mph S
						Temperature: 67F

			0.0	0	OL	0.0': Topsoil: Dark brown; SILT and CLAY, some fine SAND, trace organic matter; medium stiff; moist.
				1	OL	0.2' - 4.0': Light brown; SILT and CLAY, trace fine SAND, trace organic matter; hard; moist.
	4/4		3.3			
			3.9	2		
			2.0	3		
	4/4		2.3	4	OH	4.0' - 8.0': Reddish brown; CLAY, trace SILT, trace organic matter; hard; moist.
			5.7	5		
			4.8	6		
			4.7	7		
				8		End of boring at 8.0-ft bgs.
				9		
				10		
				11		
				12		
				13		
				14		
				15		
				16		
				17		
				18		
				19		
				20		
				21		
				22		
				23		
				24		
				25		
				26		
				27		
				28		
				29		

Logged by: Robert Peterson Date: 10-26-12
 Drilling Contractor: GeoLogic NY, Inc. Driller: Dave Lyons



EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates: Northing 1027291.35 Easting: 1084476.19
Surface Elevation: 595.64
Casing Below Surface: N/A
Reference Elevation: 595.64
Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: Geoprobe Direct-Push		Soil Boring Number: SB-06
Sampling Method: Sterilized acetate sleeves		Sheet 1 of 1
Water Level:		Drilling
Time:		Start Finish
Date:		DATE: 10-26-12 DATE: 10-26-12
		TIME: 07:52 TIME: 08:00

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Description
				in Feet		
			0.8	0	OL	0.0': Topsoil: Dark brown; SILT and CLAY, some fine SAND, trace organic matter; medium stiff; moist.
			1.1	1	OL	0.2' - 2.0': Light brown; SILT and CLAY, trace fine SAND; hard; moist.
	4/4		2.7	2	SM	2.0' - 2.5': Light brown; fine SAND, some SILT.
			0.6	3	OL	2.5' - 4.0': Light brown; SILT and CLAY, trace organic matter; hard; moist.
	4/4		1.5	4	OH	4.0' - 8.0': Reddish brown; CLAY, some SILT, trace organic matter; hard; moist.
			1.4	5		
			1.3	6		
			0.6	7		
				8		End of boring at 8.0-ft bgs.
				9		
				10		
				11		
				12		
				13		
				14		
				15		
				16		
				17		
				18		
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				27		
				28		
				29		

Logged by: Robert Peterson Date: 10-26-12
 Drilling Contractor: GeoLogic NY, Inc. Driller: Dave Lyons



EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates: Northing 1027157.14 Easting: 1084484.46
Surface Elevation: 595.65
Casing Below Surface: N/A
Reference Elevation: 595.65
Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: Geoprobe Direct-Push		Soil Boring Number: SB-07
Sampling Method: Sterilized acetate sleeves		Sheet 1 of 1
Water Level:		Drilling
Time:		Start Finish
Date:		DATE: 10-26-12 DATE: 10-26-12
		TIME: 07:25 TIME: 07:36

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions: Athletic Field (Grass, Topsoil) Weather: Sunny, 5-10 mph S Temperature: 67F	
				in Feet			
	4/4		0.0	0	OL	0.0': Topsoil: Dark brown; SILT and CLAY, some fine SAND, trace Organic Matter; soft; moist.	
			1.4	1		0.2' - 2.0': Fill: Black to dark brown; brick, cinders, gravel; hard; moist.	
			0.9	2	SM	2.0' - 4.0': Brown; SILT and fine SAND; hard; moist.	
	0.0		3				
	4/4		0.0	4	CH	4.0' - 8.0': Light brown; CLAY, trace SILT; hard; moist.	
			0.0	5			
			0.0	6			
			0.0	7			
	4/4		0.0	8		8.0' - 12.0': Gray, CLAY, tr. Silt, hard; moist.	
			0.0	9			
			0.0	10			
			0.0	11			
					12		End of boring at 12.0-ft bgs.
					13		
					14		
					15		
					16		
					17		
					18		
					19		
					20		
					21		
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					28		
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Logged by: Robert Peterson Date: 10-26-12
 Drilling Contractor: GeoLogic NY, Inc. Driller: Dave Lyons



EA Engineering, P.C.
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LOG OF SOIL BORING

Coordinates: Northing 1027392.75 Easting: 1084834.94
 Surface Elevation: 597.12
 Casing Below Surface: N/A
 Reference Elevation: 597.12
 Reference Description: Surface Elevation

Job. No. 1490710	Client: NYSDEC	Location: Lackawanna, NY	
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-08	
Drilling Method: Geoprobe Direct-Push		Sheet 1 of 1	
Sampling Method: Sterilized acetate sleeves		Drilling	
Water Level:		Start	Finish
Time:		DATE: 10-26-12	DATE: 10-26-12
Date:		TIME: 09:40	TIME: 09:47

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions: Grass, Topsoil Weather: Sunny, 5-10 mph S Temperature: 67F
				in Feet		
	4/4		0.1	0		0.0' - 4.0': Fill: Dark brown; cinders, glass, gravel; soft; dry.
			2.4	1		
			3.1	2	OL	4.0' - 6.0': Brownish gray; SILT and CLAY, trace organic matter; hard; moist.
	4/4		1.2	3		
			0.2	4		
			0.7	5		
			1.1	6	CH	6.0' - 8.0': Gray; CLAY; hard; moist.
			1.4	7		
				8		End of boring at 8.0-ft bgs.
				9		
				10		
				11		
				12		
				13		
				14		
				15		
				16		
				17		
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				28		
				29		

Logged by: Robert Peterson Date: 10-26-12
 Drilling Contractor: GeoLogic NY, Inc. Driller: Dave Lyons



EA Engineering, P.C.
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LOG OF SOIL BORING

Coordinates: Northing 1027245.62 Easting: 1084853.39
Surface Elevation: 595.60
Casing Below Surface: N/A
Reference Elevation: 595.60
Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: Geoprobe Direct-Push		Soil Boring Number: SB-09
Sampling Method: Sterilized acetate sleeves		Sheet 1 of 1
Water Level:		Drilling
Time:		Start Finish
Date:		DATE: 10-26-12 DATE: 10-26-12
		TIME: 09:20 TIME: 09:30

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Soil Description
				in Feet		
			4.7	0	SP	0.0': Topsoil: Dark brown; medium to coarse SAND, some GRAVEL, trace organic matter; medium stiff; moist.
				1	OL	0.2' - 4.0': Brown; SILT, trace CLAY, trace organic matter; hard; dry.
	4/4		2.6			
			2.4	2		
			1.2	3		
	4/4		1.0	4	OH	4.0' - 8.0': Brown; CLAY, trace SILT, trace organic matter; medium plasticity, hard; moist.
			2.3	5		
			0.3	6		
			1.6	7		
				8		End of boring at 8.0-ft bgs.
				9		
				10		
				11		
				12		
				13		
				14		
				15		
				16		
				17		
				18		
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				20		
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				22		
				23		
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				25		
				26		
				27		
				28		
				29		

Logged by: Robert Peterson Date: 10-26-12
 Drilling Contractor: GeoLogic NY, Inc. Driller: Dave Lyons



EA Engineering, P.C.
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LOG OF SOIL BORING

Coordinates: Northing 1027087.15 Easting: 1084843.41
Surface Elevation: 595.68
Casing Below Surface: N/A
Reference Elevation: 595.68
Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: Geoprobe Direct-Push		Soil Boring Number: SB-10
Sampling Method: Sterilized acetate sleeves		Sheet 1 of 1
Water Level:		Drilling
Time:		Start Finish
Date:		DATE: 10-26-12 DATE: 10-26-12
		TIME: 09:00 TIME: 09:10

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Soil Description
				in Feet		
			0.0	0	SP	0.0': Topsoil: Dark brown; medium to coarse SAND, some GRAVEL, trace organic matter; medium stiff; moist.
				1	OL	0.2' - 4.0': Light brown; SILT, some CLAY, trace fine SAND, trace organic matter; soft; dry.
	4/4		2.2			
			1.8	2		
			1.5	3		
	4/4		0.1	4	OH	4.0' - 6.0': Light brown; CLAY and SILT, trace fine SAND; hard; dry.
			0.3	5		
			1.4	6		6.0' - 8.0': Gray; CLAY, moderate plasticity; hard; moist.
			1.3	7		
				8		End of boring at 8.0-ft bgs.
				9		
				10		
				11		
				12		
				13		
				14		
				15		
				16		
				17		
				18		
				19		
				20		
				21		
				22		
				23		
				24		
				25		
				26		
				27		
				28		
				29		

Logged by: Robert Peterson Date: 10-26-12
 Drilling Contractor: GeoLogic NY, Inc. Driller: Dave Lyons



EA Engineering, P.C.
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LOG OF SOIL BORING

Coordinates: Northing 1027171.74 Easting: 1084688.56
Surface Elevation: 604.21
Casing Below Surface: N/A
Reference Elevation: 604.21
Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: 4.5' Hollow Stem Auger		Soil Boring Number: SB-11
Sampling Method: 55 / macro Cores		Sheet 1 of 1
Water Level:		Drilling
Time:		Start Finish
Date:		DATE: 11-16-12 DATE: 11-16-12
		TIME: 14:40 TIME: 1650

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions: Gravel	
						Weather: Sunny	
Temperature: 38F							
12	2/1.5		1.1	0		0.0'-1.5': Fill: CLAY and SILT, some fine SAND, some GRAVEL, glass, slag, wood; hard; moist.	
23				1			
14							
18	2/2		3.7	2		2.0'-2.5': Fill: brown; CLAY and SILT, some fine SAND, trace GRAVEL, trace glass, trace slag; hard; moist.	
21				3		2.5'-4.0': Fill: black; CLAY and SILT, some fine SAND, trace GRAVEL, trace glass, trace slag; hard; moist.	
19							
31	2/2		11.1	4		4.0'-6.0': Fill: Gray; CLAY and SILT, some fine SAND, trace GRAVEL, trace glass, trace slag, brick; hard; moist.	
24				5			
5							
6	2/2		10.5	6		6.0'-8.0': Fill: Brown; CLAY and SILT, trace glass, trace slag, trace metal fragments; hard; moist.	
7				7			
10							
10	2/2		10.8	8		8.0'-9.0': Fill: Brown; CLAY and SILT, trace glass, trace slag, trace metal fragments; hard; moist.	
9				9		9.0'-10.0': Fill: loose slag and gravel; saturated. Unable to sample, no sediment.	
9							
6	2/2		6.2	10		10.0'-12.0': Fill: Black; CLAY and SILT, some fine SAND, coal, slag, glass; stiff; saturated.	
2				11			
8							
21	2/1.5		5.1	12		12.0'-13.5': Fill: Black; CLAY and SILT, some fine SAND, coal, slag, glass; stiff; saturated.	
15				13			
14							
20	2/1.8		0.0	14		14.0'-15.8': Light brown; SILT and CLAY; hard; moist; moderate plasticity.	
16				15			
10							
6	2/2		0.0	16		16.0'-18.0': Light brown; SILT and CLAY; hard; moist; moderate plasticity.	
5				17			
18							
6				18		End of boring at 18 ft bgs.	
9				19			
16				20			
24			21				
25			22				
28			23				
33			24				
40			25				
			26				
			27				
			28				
			29				

Logged by: Robert Peterson Date: 11-16-12
 Drilling Contractor: GeoLogic NY, Inc. Driller: Dave Lyons



EA Engineering, P.C.
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LOG OF SOIL BORING

Coordinates: Northing 1027237.4 Easting: 1084662.13
Surface Elevation: 609.54
Casing Below Surface: N/A
Reference Elevation: 609.54
Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC	Location: Lackawanna, NY	
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-12	
Drilling Method: Geoprobe Direct-Push		Sheet 1 of 1	
Sampling Method: Sterilized acetate sleeves		Drilling	
Water Level:		Start	Finish
Time:		DATE: 10-25-12	DATE: 10-25-12
Date:		TIME: 15:20	TIME: 15:45

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions: Grass, Topsoil	
				in Feet		Weather: Sunny, 10-15 mph S	Temperature: 75F
	4/2		0.0	0		0.0'-2.0': Brown (fill); GRAVEL, some medium SAND, trace glass.	
			0.1	1			
			2	2.0'-4.0': No recovery.			
	4/0		3				
			4	4.0' - 8.0': No recovery.			
			5				
	4/2		6				
			7				
			8	8.0'-10.0': Brown (fill); GRAVEL, some medium SAND, trace glass.			
	4/4		9	0.0			
			10	10.0'-12.0': No recovery.			
			11				
	4/4		12	0.0	12.0'-16.0': Brown; CLAY, some SILT.		
			13	0.0			
			14	0.0			
	4/4		15	0.0			
			16	16.0'-18.0': Black (fill); ash GRAVEL, coarse SAND; moist.			
			17	0.0			
			18	0.0	18.0'-20.0': Reddish brown; CLAY, trace SILT; moist; soft.		
			19	0.0			
			20	End of boring at 20 ft bgs.			
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				

Logged by: Robert Peterson Date: 10-25-12
 Drilling Contractor: GeoLogic NY, Inc. Driller: Dave Lyons



EA Engineering, P.C.
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LOG OF SOIL BORING

Coordinates: Northing 1027311.77 Easting: 1084718.06
Surface Elevation: 613.95
Casing Below Surface: N/A
Reference Elevation: 613.95
Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: Geoprobe Direct-Push		Soil Boring Number: SB-13
Sampling Method: Sterilized acetate sleeves		Sheet 1 of 1
Water Level:		Drilling
Time:		Start Finish
Date:		DATE: 10-25-12 DATE: 10-25-12
		TIME: 14:00 TIME: 15:00

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions: Gravel, debris
				in Feet		Weather: Sunny
						Temperature: 70F
	4/1		19.5	0		0.0'-1.0': Brown; GRAVEL and SAND, some SILT, ash (fill); dry.
				1		1.0'-4.0': No recovery.
	4/0.5		0.7	2		2.0'-2.5': Black; Ash, GRAVEL, some medium SAND (fill); dry.
				3		
	4/2		4	4		4.0' - 6.0': Brown; fill (ash, slag, medium SAND, trace GRAVEL).
				5		
	4/4		6	6		6.0'-8.0': Brown; fill (ash, slag, medium SAND, trace GRAVEL).
				7		
				8		8.0'-12.0': Tan; SILT, trace CLAY, trace GRAVEL; dry; hard.
				9		
				10		
				11		
				12		
				13		
				14		
	4/2		0.0	15		
				16		16.0'-18.0': Dark brown; CLAY and SILT, some GRAVEL, trace glass; moist.
				17		
				18		18.0'-20.0': No recovery.
	4/2		9.1	19		
				20		20'-22': Fill; black; medium to coarse SAND and GRAVEL, some glass.
				21		
	4/2		0.0	22		
				23		23.0'-25.0': Gray; CLAY, trace SILT; hard; moist.
				24		
				25		End of boring at 25 ft bgs.
				26		
				27		
				28		
	29					

Logged by: Robert Peterson Date: 10-25-12
 Drilling Contractor: GeoLogic NY, Inc. Driller: Dave Lyons



EA Engineering, P.C.
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LOG OF SOIL BORING

Coordinates: Northing 1027413.6 Easting: 1084762.29
 Surface Elevation: 594.22
 Casing Below Surface: N/A
 Reference Elevation: 594.22
 Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-14
Drilling Method: Geoprobe Direct-Push		Sheet 1 of 1
Sampling Method: Sterilized acetate sleeves		Drilling
Water Level:		Start
Time:		Finish
Date:		DATE: 10-25-12
		TIME: 13:05

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions: Grass / topsoil
				in Feet		
						Temperature: 75F
	4/4		0.9	0		0.0'-3.0': Reddish brown; SILT, trace CLAY, trace organics; soft; dry.
			1.6	1		
			1.1	2		
	4/4		0.3	3		3.0'-4.0': Brown; CLAYEY SILT, trace organics; hard; dry.
			0.0	4		4.0' - 7.0': Brown; CLAYEY SILT, trace organics; hard; dry.
			0.6	5		
	4/4		0.2	6		
			0.0	7		7.0'-8.0': Grayish brown; SILT and CLAY; moderate plasticity; moist; hard.
			0.0	8		8.0'-12.0': Gray; CLAY; very plastic; soft; moist.
			0.0	9		
			0.0	10		
			0.0	11		
				12		End of boring at 12 ft bgs.
				13		
				14		
				15		
				16		
				17		
				18		
				19		
				20		
				21		
				22		
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				29		

Logged by: Robert Peterson Date: 10-25-12
 Drilling Contractor: GeoLogic NY, Inc. Driller: Dave Lyons



EA Engineering, P.C.
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LOG OF SOIL BORING

Coordinates: Northing 1027403.71 Easting: 1084594.06
 Surface Elevation: 594.98
 Casing Below Surface: N/A
 Reference Elevation: 594.98
 Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-15
Drilling Method: Geoprobe Direct-Push		Sheet 1 of 1
Sampling Method: Sterilized acetate sleeves		Drilling
Water Level:		Start
Time:		Finish
Date:		DATE: 10-25-12
		DATE: 10-25-12
		TIME: 11:45
		TIME: 12:00

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions: Grass / topsoil
				in Feet		
						Temperature: 75F
	4/2		1.0	0		0.0'-1.0': Brown; medium to fine SAND, some GRAVEL; dry; fill.
			2.8	1		1.0'-2.0': Dark brown; CLAY, some SILT, trace SAND, trace organics; moist.
			x	2		2.0'-4.0': No recovery.
	4/4		x	3		
			1.2	4		4.0' - 8.0': Brown; CLAYEY SILT; hard; moist.
			5.4	5		
			6.3	6		
	4/4		3.6	7		
			0.0	8		8.0'-11.0': Brown; CLAYEY SILT; hard; moist.
			0.0	9		
			0.0	10		
			0.0	11		11.0'-12.0': Gray; CLAYEY SILT; hard; moist.
				12		End of boring at 12 ft bgs.
				13		
				14		
				15		
				16		
				17		
				18		
				19		
				20		
				21		
				22		
				23		
				24		
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				27		
				28		
				29		

Logged by: Robert Peterson Date: 10-25-12
 Drilling Contractor: GeoLogic NY, Inc. Driller: Dave Lyons



EA Engineering, P.C.
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LOG OF SOIL BORING

Coordinates: Northing 1027293.29 Easting: 1084577.36
 Surface Elevation: 595.53
 Casing Below Surface: N/A
 Reference Elevation: 595.53
 Reference Description: Surface Elevation

Job. No. 1490710	Client: NYSDEC	Location: Lackawanna, NY	
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-16	
Drilling Method: Geoprobe Direct-Push		Sheet 1 of 1	
Sampling Method: Sterilized acetate sleeves		Drilling	
Water Level:		Start	Finish
Time:		DATE: 10-25-12	DATE: 10-25-12
Date:		TIME: 10:50	TIME: 11:10

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions: Grass / topsoil	
				in Feet		Weather: Sunny	Temperature: 75F
	4/4		0.0	0		0.0'-2.0': Dark brown; fine to medium SAND, trace SILT, trace GRAVEL (fill); moist.	
			5.6	1			
			3.9	2		2.0'-4.0': Reddish brown; SILTY CLAY, trace organics; moist; moderate plasticity.	
			3.4	3			
	4/4		0.2	4		4.0' - 8.0': Reddish brown; SILTY CLAY, trace organics; moist; moderate plasticity.	
			2.4	5			
			1.0	6			
			0.0	7			
	4/4		0.0	8		8.0'-10.0': Reddish brown; SILTY CLAY, trace organics; moist; moderate plasticity.	
			0.0	9			
			0.0	10		10.0'-12.0': Gray; CLAYEY SILT; moderate plasticity; hard; moist.	
			0.0	11			
	4/4		0.0	12		10.0'-16.0': Gray; CLAYEY SILT; moderate plasticity; hard; moist.	
			0.0	13			
			0.0	14			
			0.0	15			
				16		End of boring at 16' bgs.	
				17			
				18			
				19			
				20			
				21			
				22			
				23			
				24			
				25			
				26			
				27			
			28				
			29				

Logged by: Robert Peterson
 Drilling Contractor: GeoLogic NY, Inc.

Date: 10-25-12
 Driller: Dave Lyons



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LOG OF SOIL BORING

Coordinates: Northing 1027251.88 Easting: 1084580.34
Surface Elevation: 595.53
Casing Below Surface: N/A
Reference Elevation: 595.53
Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: Geoprobe Direct-Push		Soil Boring Number: SB-17
Sampling Method: Sterilized acetate sleeves		Sheet 1 of 1
Water Level:		Drilling
Time:		Start Finish
Date:		DATE: 10-25-12 DATE: 10-25-12
		TIME: 10:10 TIME: 10:25

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions: Gravel / soil Weather: Sunny, 10-15 mph south Temperature: 75F
				in Feet		
	4/4		0.0	0		0.0'-1.0': Dark brown; SAND and SILT, trace GRAVEL (fill); moist.
			0.5	1		1.0'-4.0': Reddish brown; CLAY, trace SILT; moist.
			9.6	2		
	4.5		3			
	4/4		0.8	4		4.0' - 8.0': Reddish brown; CLAY, trace SILT; moist.
			0.9	5		
			0.3	6		
	4/4		0.7	7		
			13.6	8		8.0'-12.0': Reddish brown; CLAY, trace SILT; moist.
			10.3	9		
			4.8	10		
			3.7	11		
				12		End of boring at 12 ft bgs.
				13		
				14		
				15		
				16		
				17		
				18		
				19		
				20		
				21		
				22		
				23		
				24		
				25		
				26		
				27		
				28		
				29		

Logged by: Robert Peterson Date: 10-25-12
 Drilling Contractor: GeoLogic NY, Inc. Driller: Dave Lyons



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LOG OF SOIL BORING

Coordinates: Northing 1027162.28 Easting: 1084602.83
Surface Elevation: 596.40
Casing Below Surface: N/A
Reference Elevation: 596.40
Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: Geoprobe Direct-Push		Soil Boring Number: SB-18
Sampling Method: Sterilized acetate sleeves		Sheet 1 of 1
Water Level:		Drilling
Time:		Start Finish
Date:		DATE: 10-26-12 DATE: 10-26-12
		TIME: 10:05 TIME: 10:20

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions: Gravel / soil Weather: Sunny, 10-15 mph south Temperature: 75F
				in Feet		
	4/3		2.2	0		0.0'-3.0': Dark brown; CLAYEY SILT, some GRAVEL, some glass; hard; moist (fill).
			3.4	1		
			1.7	2		
	x		3		3.0'-4.0': No recovery.	
	4/0.5		x	4		4.0' - 4.5': Black; CLAYEY SILT, some GRAVEL, some glass; hard; wet (fill). 4.5'-8.0': No recovery.
			x	5		
			x	6		
	4/4			7		
			0.0	8		8.0'-12.0': Gray; CLAY, trace organics; hard; high plasticity.
			0.0	9		
			0.0	10		
	4/4			11		
				12		12.0'-16.0': Gray; CLAY, trace organics; hard; high plasticity.
				13		
				14		
	4/4			15		
				16		16.0'-20.0': Gray; CLAY, trace organics; hard; high plasticity.
				17		
				18		
	4/4			19		
				20		20.0'-24.0': Gray; CLAY, trace organics; hard; high plasticity; wet/saturated.
				21		
				22		
	4/4			23		
				24		24.0'-28.0': Gray; CLAY, trace organics; hard; high plasticity; wet/saturated.
				25		
				26		
				27		
			28		End of boring at 28 ft bgs.	
			29			

Logged by: Robert Peterson Date: 10-26-12
 Drilling Contractor: GeoLogic NY, Inc. Driller: Dave Lyons



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LOG OF SOIL BORING

Coordinates: Northing 1027477.65 Easting: 1084405.18
 Surface Elevation: 593.50
 Casing Below Surface: N/A
 Reference Elevation: 593.50
 Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-19
Drilling Method: Geoprobe		Sheet 1 of 1
Sampling Method: MacroCore		Drilling
Water Level:		Start
Time:		Finish
Date:		DATE 04-15-13
		TIME 13:30

Blow Counts (140-lb)	Ft. Driven/ Recvr'd	Ft.	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:	
							Grass, Topsoil	
							Weather:	
							Temperature:	
							60F	
				0	0		0' - 1'	Brown; silty CLAY, some organics, trace glass [fill]; moist.
				0	1			
	4/3			0	2		2' - 3'	Dark brown; SILT and CLAY, some medium sand, trace gravel, trace glass, trace brick [fill]; moist.
				0	3			
				0	4		4' - 7'	Brown; SILTY CLAY; hard; moist; moderate plasticity.
	4/3			0	5			
				0	6			
				0	7			End of boring at 7 ft bgs.
					8			
					9			915206-SB-DUPLICATE-06 collected from 2-4 bgs
					10			MS/MSD collected from 2-4 bgs
					11			
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19			
					20			
					21			
					22			
					23			
					24			
					25			
					26			
					27			
					28			
					29			

Logged by: Robert Peterson Date: 04/15/13
 Drilling Contractor: GeoLogic NY, Inc. Driller: Scott Breeds



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LOG OF SOIL BORING

Coordinates: Northing 1027213.71 Easting: 1084391.32
 Surface Elevation: 595.40
 Casing Below Surface: N/A
 Reference Elevation: 595.40
 Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-20
Drilling Method: Geoprobe		Sheet 1 of 1
Sampling Method: MacroCore		Drilling
Water Level:		Start
Time:		Finish
Date:		DATE 04-15-13
		TIME 13:30

Blow Counts (140-lb)	Ft. Driven/ Recvr'd	Ft.	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:	
							Tall Grass/Topsoil	
							Weather:	
							Temperature:	
	4/3			0	0	0' - 0.5'	Dark brown; SILTY CLAY, some organics, trace fine SAND; moist; soft.	
		0	1	0.5' - 2'	Light brown; CLAYEY SILT, trace organics; oxidized laminations; moist; hard.			
		0.2	2	2' - 3.9'	Light brown; CLAYEY SILT, trace fine SAND; moist; hard.			
		0	3					
			4	4'	Light brown; fine SAND, some SILT; moist; stiff.			
			5	MS/MSD collected from 2'-4' bgs 915206-SB-20 (2-4) MSMSD				
			6					
			7					
			8	End of boring at 8 ft bgs.				
			9					
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
		29						

Logged by: Robert Peterson Date: 04/16/13
 Drilling Contractor: GeoLogic NY, Inc. Driller: Scott Breeds



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LOG OF SOIL BORING

Coordinates: Northing 1027151.64 Easting: 1084390.86
Surface Elevation: 595.09
Casing Below Surface: N/A
Reference Elevation: 595.09
Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: Geoprobe		Soil Boring Number: SB-21
Sampling Method: MacroCore		Sheet 1 of 1
Drilling		
Water Level:		Start
Time:		Finish
Date:		DATE 04-15-13
		DATE 04-15-13
		TIME 13:30
		TIME 10:15

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:		
						Tall Grass/Topsoil		
						Weather:		
						Sunny		
						Temperature:		
						50F		
	4/3		0	0	0' - 2'	Dark brown; SILTY CLAY, some fine SAND trace organics, trace brick; moist; stiff.		
			0	1				
			0.2	2	2' - 3.8'	Light brown; SILT, some fine SAND; moist; stiff.		
			0	3				
				4	3.8' - 4'	Light brown; CLAY and SILT; oxidized laminations; moist; hard.		
				5		915206-SB-DUPLICATE-07 collected from 0' - 2' bgs		
				6				
				7				
				8		End of boring at 8 ft bgs.		
				9				
				10				
				11				
				12				
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				
				21				
				22				
				23				
				24				
				25				
				26				
				27				
				28				
		29						

Logged by: Robert Peterson Date: 04/16/13
 Drilling Contractor: GeoLogic NY, Inc. Driller: Scott Breeds



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LOG OF SOIL BORING

Coordinates: Northing 1027462.28 Easting: 1084943.94
 Surface Elevation: 596.36
 Casing Below Surface: N/A
 Reference Elevation: 596.36
 Reference Description: Surface Elevation

Job No. 1490710 Client: NYSDEC
 Project: Lackawanna Incinerator Site

Location: Lackawanna, NY

Drilling Method: Geoprobe

Soil Boring Number: SB-22

Sampling Method: MacroCore

Sheet **1** of **1**

Water Level: _____
 Time: _____
 Date: _____

Drilling
 Start _____ Finish _____
 DATE 04-15-13 DATE 04-15-13
 TIME 13:30 TIME 10:15

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions:	
				in Feet		Grass, Topsoil	Weather:
							Sunny
							60F
	4/4		0	0	0' - 1'	Dark brown; FILL: slag, broken glass, brick, gravel.	
			7.5	1	1' - 3'	Gray; CLAYEY SILT, trace organics; moist; stiff; moderate plasticity; oxidized laminations.	
			10.5	2			
	4/3		0	3	3' - 4'	Light brown; SILT, some fine SAND; moist; soft.	
			1.2	4	4' - 7'	Light brown; SILTY CLAY; trace organics moist; hard.	
			1.6	5			
			1.6	6			
			0	7		End of boring at 7 ft bgs.	
				8			
				9			
			10				
			11				
			12				
			13				
			14				
			15				
			16				
			17				
			18				
			19				
			20				
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				

Logged by: Robert Peterson
 Drilling Contractor: GeoLogic NY, Inc.

Date: 04/15/13
 Driller: Scott Breeds



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LOG OF SOIL BORING

Coordinates: Northing 1027445.29 Easting: 1084860.45
Surface Elevation: 596.34
Casing Below Surface: N/A
Reference Elevation: 596.34
Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-23
Drilling Method: Geoprobe		Sheet 1 of 1
Sampling Method: MacroCore		Drilling
Water Level:	Start	Finish
Time:	DATE 04-15-13	DATE 04-15-13
Date:	TIME 13:30	TIME 10:15

Blow Counts (140-lb)	Ft. Driven/ Recvrd	Ft.	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:	
							Gravel, Debris, FILL	
							Weather:	
							Sunny	
							Temperature:	
							60F	
				0	0		1' - 3'	Dark brown; medium to fine SAND some CLAY some SILT, some brick, some glass (fill); moist.
				0	1			
				0	2			
				0	3		3' - 4'	Dark gray; CLAYEY SILT, some organics; stiff; moist.
				0	4		4' - 8'	Light brown; CLAYEY SILT, trace organics; stiff; wet; oxidized laminations.
				0	5			
				0	6			
				0	7			
					8			End of boring at 8 ft bgs.
					9			
					10			
					11			
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19			
					20			
					21			
					22			
					23			
					24			
					25			
					26			
					27			
					28			
					29			

Logged by: Robert Peterson Date: 04/15/13
 Drilling Contractor: GeoLogic NY, Inc. Driller: Scott Breeds



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LOG OF SOIL BORING

Coordinates: Northing 1027345.12 Easting: 1084881.01
Surface Elevation: 595.66
Casing Below Surface: N/A
Reference Elevation: 595.66
Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC	Location: Lackawanna, NY	
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-24	
Drilling Method: Geoprobe		Sheet 1 of 1	
Sampling Method: MacroCore			
Water Level:		Start	Finish
Time:		DATE 04-15-13	DATE 04-15-13
Date:		TIME 13:30	TIME 10:15

Blow Counts (140-lb)	Ft. Driven/ Recvrd	Ft.	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:	
							Tall Grass/Topsoil	
							Weather:	
							Sunny	
							Temperature:	
							50F	
				0	0		0' - 0.5'	Black; SILTY CLAY, some medium SAND trace organics, trace brick, trace glass; moist; soft.
				0	1		0.5' - 3'	Light brown; SILTY CLAY; moist; hard.
	4/3			1.1	2			
				0	3			
				0	4		4' - 8'	Light brown; CLAY and SILT, trace organics; stiff; dry; oxidized laminations.
	4/4			0	5			
				1.0	6			
				0	7			
					8			End of boring at 8 ft bgs.
					9			
					10			
					11			
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19			
					20			
					21			
					22			
					23			
					24			
					25			
					26			
					27			
					28			
					29			

Logged by: Robert Peterson Date: 04/15/13
 Drilling Contractor: GeoLogic NY, Inc. Driller: Scott Breeds



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LOG OF SOIL BORING

Coordinates: Northing 1027161.48 Easting: 1084907.55
Surface Elevation: 597.18
Casing Below Surface: N/A
Reference Elevation: 597.18
Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: Geoprobe		Soil Boring Number: SB-25
Sampling Method: MacroCore		Sheet 1 of 1
Drilling		
Water Level:		Start
Time:		Finish
Date:		DATE 04-15-13
		TIME 13:30

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:	
						Tall Grass/Topsoil	
						Weather:	Sunny
						Temperature:	50F
			0	0	0' - 2'	Brown; SILTY CLAY, some organics, trace fine SAND; moist.	
	4/3		0	1			
			0.2	2	2' - 3'	Light brown; fine SAND and SILT; moist.	
			0	3			
			0	4	4' - 6'	Light brown; CLAYEY SILT, trace fine SAND; moist.	
	4/4		0	5			
			1.0	6	6' - 8'	Gray; CLAY, trace SILT; hard; dry.	
			0	7			
				8		End of boring at 8 ft bgs.	
				9			
				10			
				11			
				12			
				13			
				14			
				15			
				16			
				17			
				18			
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				21			
				22			
				23			
				24			
				25			
				26			
				27			
				28			
				29			

Logged by: Robert Peterson Date: 04/15/13
 Drilling Contractor: GeoLogic NY, Inc. Driller: Scott Breeds



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LOG OF SOIL BORING

Coordinates: Northing 1027315.04 Easting: 1084720.95
Surface Elevation: 613.09
Casing Below Surface: N/A
Reference Elevation: 613.09
Reference Description: Surface Elevation

Job No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: Geoprobe		Soil Boring Number: SB-WC
Sampling Method: MacroCore		Sheet 1 of 1
Water Level:		Start
Time:		Finish
Date:		DATE 04-15-13
		TIME 13:30

Blow Counts (140-lb)	Ft. Driven/ Recvr'd	Ft.	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:	
							Gravel, Debris, FILL.	
							Weather:	
							Sunny	
							Temperature:	
							60F	
				0	0	0' - 4'	Dark brown to black; coarse SAND and GRAVEL, some glass trace brick (fill) moist.	
	4/1			0	1			
				0	2			
				0	3			
				0	4	4' - 8'	Brown to reddish brown; coarse to medium SAND, some GRAVEL, some broken glass, trace brick, trace slag (FILL); moist.	
	4/1			0	5			
				0	6			
				0	7		Multiple runs were completed for enough recovery.	
					8		End of boring at 8 ft bgs.	
					9			
					10			
					11			
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19			
					20			
					21			
					22			
					23			
					24			
					25			
					26			
					27			
					28			
					29			

Logged by: Robert Peterson Date: 04/15/13
 Drilling Contractor: GeoLogic NY, Inc. Driller: Scott Breeds



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LOG OF SOIL BORING

Coordinates: Northing 1027475.11 Easting: 1084221.31
 Surface Elevation: 592.80
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-35
Drilling Method: Slide hammer		Sheet 1 of 1
Sampling Method: MacroCore		Drilling
Water Level:		Start
Time:		Finish
Date:		DATE 07-01-13
		TIME 0800

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:
				0		Grass, Topsoil
				0		Weather: overcast
				1		Temperature: 70F
	4/4			0		0.0' - 0.4' Light brown, clayey SILT, some organic matter. Soft, moist, TOPSOIL.
				1		0.4' - 2.0' Brown, SILT and CLAY, some glass, some slag. Moist, soft, FILL.
				2		2' - 3.5' [Fill] SAA
				0		3.5' - 4' Light Brown, CLAY, trace silt, high plasticity, moist. Stiff.
				3		
				4		
				5		EOB at 4 ft bgs.
				6		Sampled @ 0818
				7		
				8		
				9		
				10		
				11		
				12		
				13		
				14		
				15		
				16		
				17		
				18		
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				23		
				24		
				25		
				26		
				27		
				28		
				29		

Monitoring Well Construction Information Monitoring Well Diameter: _____ in Bottom of Monitoring Well: _____ ft bgs Stick Up or Flush Mount: _____ Screen Interval: _____ To _____ ft bgs Riser Interval: _____ To _____ ft bgs Sand Pack Interval: _____ To _____ ft bgs Bentonite Seal: _____ To _____ ft bgs Grout Interval: _____ To _____ ft bgs		Soil Vapor Point Installation Information Depth of Soil Vapor Point: _____ ft Bottom of Tubing: _____ ft Top of Sand Pack: _____ ft Top of Bentonite Seal: _____ ft	
Logged by: <u>Robert Peterson/Charles Yarrington</u>		Date: <u>07/1/13</u>	
Drilling Contractor: <u>GeoLogic NY, Inc.</u>		Driller: <u>NA</u>	



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LOG OF SOIL BORING

Coordinates: Northing 1027475.05 Easting: 1084114.76
 Surface Elevation: 593.28
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job. No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: Slide hammer		Soil Boring Number: SB-36
Sampling Method: MacroCore		Sheet 1 of 1
Water Level:		Start
Time:		Finish
Date:		DATE 07-01-13
		TIME 0830

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions:
				in		Feet
						Weather:
						Temperature:
	4/4		0	0		0.0' - 0.3' Brown, clayey CLT, trace organic matter, soft, moist, TOPSOIL
			0	1		0.3' - 1.0' L. Brown, silty CLAY, trace organic matter, stiff moist, CLAY
			0	2		1' - 2' [Fill] SAA
			0	3		2' - 4' Lght grayish brown, silty CLAY, trace organic matter, hard, moist, moderate plasticity
				4		
				5		EOB at 4 ft bgs.
				6		Sampled @ 0845
				7		
				8		
				9		
				10		
				11		
				12		
				13		
				14		
				15		
				16		
				17		
				18		
				19		
				20		
				21		
				22		
				23		
				24		
				25		
				26		
				27		
				28		
				29		

Monitoring Well Construction Information		Soil Vapor Point Installation Information	
Monitoring Well Diameter: _____ in	Bottom of Monitoring Well: _____ ft bgs	Depth of Soil Vapor Point: _____ ft	Bottom of Tubing: _____ ft
Stick Up or Flush Mount: _____	Screen Interval: _____ To _____ ft bgs	Top of Sand Pack: _____ ft	Top of Bentonite Seal: _____ ft
Riser Interval: _____ To _____ ft bgs	Sand Pack Interval: _____ To _____ ft bgs		
Bentonite Seal: _____ To _____ ft bgs	Grout Interval: _____ To _____ ft bgs		

Logged by: Robert Peterson/Charles Yarrington Date: 07/1/13
 Drilling Contractor: GeoLogic NY, Inc. Driller: NA



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LOG OF SOIL BORING

Coordinates: Northing 1027594.94 Easting: 1085306.64
 Surface Elevation: 596.30
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-38
Drilling Method: Slide hammer		Sheet 1 of 1
Sampling Method: MacroCore		Drilling
Water Level:		Start
Time:		Finish
Date:		DATE 07-01-13
		TIME 1015

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth		USCS Log	Surface Conditions:	
				in	Feet		Grass, Topsoil	Weather:
	2/2		0	0	0		0.0' - 0.2'	TOPSOIL dark brown, clayey SILT, some organic matter, trace fine sand, moist, stiff.
				1		0.2' - 2.0'	Brown, clayey SILT, trace glass, trace brick, hard, moist	
				2				
				3				
				4				
				5				EOB at 2 ft bgs.
				6				Sampled 0-1 @ 1017
				7				Sampled 1-2 @ 1017
				8				
				9				
				10				
				11				
				12				
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				
				21				
				22				
				23				
				24				
				25				
				26				
				27				
				28				
				29				

Monitoring Well Construction Information				Soil Vapor Point Installation Information			
Monitoring Well Diameter:	_____	in		Depth of Soil Vapor Point:	_____	ft	
Bottom of Monitoring Well:	_____	ft bgs		Bottom of Tubing:	_____	ft	
Stick Up or Flush Mount:	_____			Top of Sand Pack:	_____	ft	
Screen Interval:	_____	To _____	ft bgs	Top of Bentonite Seal:	_____	ft	
Riser Interval:	_____	To _____	ft bgs				
Sand Pack Interval:	_____	To _____	ft bgs				
Bentonite Seal:	_____	To _____	ft bgs				
Grout Interval:	_____	To _____	ft bgs				

Logged by: Robert Peterson/Charles Yarrington Date: 07/1/13
 Drilling Contractor: GeoLogic NY, Inc. Driller: NA



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LOG OF SOIL BORING

Coordinates: Northing 1027594.14 Easting: 1085340.09
 Surface Elevation: 596.30
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-39
Drilling Method: Slide hammer		Sheet 1 of 1
Sampling Method: MacroCore		Drilling
Water Level:		Start
Time:		Finish
Date:		DATE 07-01-13
		TIME 1015

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions:		
				in Feet		Grass, Topsoil		
						Weather:		
						Temperature:		
	2/2			0		0.0' - 0.2' TOPSOIL dark brown, clayey SILT, some organic matter, trace fine sand, moist, soft.		
					0.3' - 1.0' Dark brown, clayey SILT, trace organic matter, soft, moist, trace glass, trace slag.			
					0	1		1' - 2' SAA
						2		
						3		
						4		
						5		EOB at 2 ft bgs.
						6		Sampled 0-1 @ 1002
						7		Sampled 1-2 @ 1005
						8		
						9		
						10		
						11		
						12		
						13		
						14		
						15		
						16		
						17		
						18		
						19		
						20		
						21		
						22		
						23		
						24		
						25		
						26		
						27		
			28					
			29					

Monitoring Well Construction Information			Soil Vapor Point Installation Information		
Monitoring Well Diameter:	_____	in	Depth of Soil Vapor Point:	_____	ft
Bottom of Monitoring Well:	_____	ft bgs	Bottom of Tubing:	_____	ft
Stick Up or Flush Mount:	_____		Top of Sand Pack:	_____	ft
Screen Interval:	_____	To _____	Top of Bentonite Seal:	_____	ft
Riser Interval:	_____	To _____			
Sand Pack Interval:	_____	To _____			
Bentonite Seal:	_____	To _____			
Grout Interval:	_____	To _____			

Logged by: Robert Peterson/Charles Yarrington Date: 07/1/13
 Drilling Contractor: GeoLogic NY, Inc. Driller: NA



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LOG OF SOIL BORING

Coordinates: Northing 1027476.09 Easting: 1085042.18
 Surface Elevation: 596.34
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job. No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-40
Drilling Method: Slide hammer		Sheet 1 of 1
Sampling Method: MacroCore		Drilling
Water Level:		Start
Time:		Finish
Date:		DATE 07-01-13
		TIME 1240

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth		USCS Log	Surface Conditions:		
				in	Feet		Grass, Topsoil	Weather:	
	2/2		0	0		0.0' - 0.2'	Dark brown, clayey SILT, some organic matter, trace fine sand, soft, moist, TOPSOIL		
					0.3' - 1.0'	FILL brown, medium to fine SAND and fine Gravel, some glass, some brick, some slag/ash material			
			0	1		1' - 2'	Brown, silty CLAY, trace organic matter, hard, moist, moderate plasticity		
					2				
					3				
					4				
					5				EOB at 2 ft bgs.
					6				Sampled 0-1 @ 1245
					7				Sampled 1-2 @ 1245
					8				
					9				
					10				
					11				
					12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				
					23				
					24				
					25				
					26				
					27				
			28						
			29						

Monitoring Well Construction Information				Soil Vapor Point Installation Information			
Monitoring Well Diameter:	_____	in		Depth of Soil Vapor Point:	_____	ft	
Bottom of Monitoring Well:	_____	ft bgs		Bottom of Tubing:	_____	ft	
Stick Up or Flush Mount:	_____			Top of Sand Pack:	_____	ft	
Screen Interval:	_____	To _____	ft bgs	Top of Bentonite Seal:	_____	ft	
Riser Interval:	_____	To _____	ft bgs				
Sand Pack Interval:	_____	To _____	ft bgs				
Bentonite Seal:	_____	To _____	ft bgs				
Grout Interval:	_____	To _____	ft bgs				

Logged by: Robert Peterson/Charles Yarrington Date: 07/1/13
 Drilling Contractor: GeoLogic NY, Inc. Driller: NA



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LOG OF SOIL BORING

Coordinates: Northing 1027371.34 Easting: 1085036.41
 Surface Elevation: 594.58
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job. No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-41
Drilling Method: Slide hammer		Sheet 1 of 1
Sampling Method: MacroCore		Drilling
Water Level:		Start
Time:		Finish
Date:		DATE 07-01-13
		TIME 1210

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:	
						Grass, Topsoil	
Weather: overcast						Temperature: 70F	
			0	0		0.0' - 1.0'	Dark brownish Black, silty CLAY, some organic matter, trace fine sand
	2/2			1		1' - 2'	Light brown, silty CLAY, some fine sand, trace organic matter, stiff, moist
			0	2			
				3			
				4			
				5			EOB at 2 ft bgs.
				6			Sampled 0-1 @ 1217
				7			Sampled 1-2 @ 1217
				8			
				9			
				10			
				11			
				12			
				13			
				14			
				15			
				16			
				17			
				18			
				19			
				20			
				21			
				22			
				23			
				24			
				25			
				26			
				27			
				28			
				29			

Monitoring Well Construction Information		Soil Vapor Point Installation Information	
Monitoring Well Diameter: _____ in	Bottom of Monitoring Well: _____ ft bgs	Depth of Soil Vapor Point: _____ ft	Bottom of Tubing: _____ ft
Stick Up or Flush Mount: _____	Screen Interval: _____ To _____ ft bgs	Top of Sand Pack: _____ ft	Top of Bentonite Seal: _____ ft
Riser Interval: _____ To _____ ft bgs	Sand Pack Interval: _____ To _____ ft bgs		
Bentonite Seal: _____ To _____ ft bgs	Grout Interval: _____ To _____ ft bgs		
Logged by: <u>Robert Peterson/Charles Yarrington</u>	Date: <u>07/1/13</u>		
Drilling Contractor: <u>GeoLogic NY, Inc.</u>	Driller: <u>NA</u>		



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LOG OF SOIL BORING

Coordinates: Northing 1027255.06 Easting: 1085044.49
 Surface Elevation: 594.94
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job. No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-42
Drilling Method: Slide hammer		Sheet 1 of 1
Sampling Method: MacroCore		Drilling
Water Level:		Start
Time:		Finish
Date:		DATE 07-01-13
		TIME 1200

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:	
						Tall Grass, Topsoil	
Weather:						overcast	
Temperature:						70F	
			0	0		0.0' - 0.2'	TOPSOIL dark brownish black, silty CLAY, some organic matter, trace fine sand, soft, moist
	2/2			1		0.2' - 2'	Light brown, SILT and FINE Sand, trace organic matter, soft, moist
			0	2			
				3			
				4			
				5			EOB at 2 ft bgs.
				6			Sampled 0-1 @ 1200
				7			Sampled 1-2 @ 1200
				8			
				9			
				10			
				11			
				12			
				13			
				14			
				15			
				16			
				17			
				18			
				19			
				20			
				21			
				22			
				23			
				24			
				25			
				26			
				27			
				28			
				29			

Monitoring Well Construction Information			Soil Vapor Point Installation Information		
Monitoring Well Diameter:	_____	in	Depth of Soil Vapor Point:	_____	ft
Bottom of Monitoring Well:	_____	ft bgs	Bottom of Tubing:	_____	ft
Stick Up or Flush Mount:	_____		Top of Sand Pack:	_____	ft
Screen Interval:	_____	To _____	Top of Bentonite Seal:	_____	ft
Riser Interval:	_____	To _____			
Sand Pack Interval:	_____	To _____			
Bentonite Seal:	_____	To _____			
Grout Interval:	_____	To _____			

Logged by: Robert Peterson/Charles Yarrington Date: 07/1/13
 Drilling Contractor: GeoLogic NY, Inc. Driller: NA



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LOG OF SOIL BORING

Coordinates: Northing 1027478.02 Easting: 1085225.14
 Surface Elevation: 595.26
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job. No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-43
Drilling Method: Slide hammer		Sheet 1 of 1
Sampling Method: MacroCore		Drilling
Water Level:		Start
Time:		Finish
Date:		DATE 07-02-13
		TIME 0930

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:	
						Grass, Topsoil	
Weather:						overcast	
Temperature:						70F	
			0	0		0' - 1.0'	FILL glass, brick, slag/ ash, trace organic matter, trace medium to coarse sand.
	2/2			1		1' - 2'	Gray, clayey SILT, trace organic matter, hard, moist.
			0	2			
				3			
				4			
				5			EOB at 2 ft bgs.
				6			Sampled 0-1 @ 0935
				7			Sampled 1-2 @ 0935
				8			
				9			
				10			
				11			
				12			
				13			
				14			
				15			
				16			
				17			
				18			
				19			
				20			
				21			
				22			
				23			
				24			
				25			
				26			
				27			
				28			
				29			

Monitoring Well Construction Information				Soil Vapor Point Installation Information			
Monitoring Well Diameter:	_____	in		Depth of Soil Vapor Point:	_____	ft	
Bottom of Monitoring Well:	_____	ft bgs		Bottom of Tubing:	_____	ft	
Stick Up or Flush Mount:	_____			Top of Sand Pack:	_____	ft	
Screen Interval:	_____	To _____	ft bgs	Top of Bentonite Seal:	_____	ft	
Riser Interval:	_____	To _____	ft bgs				
Sand Pack Interval:	_____	To _____	ft bgs				
Bentonite Seal:	_____	To _____	ft bgs				
Grout Interval:	_____	To _____	ft bgs				

Logged by: Robert Peterson/Charles Yarrington Date: 07/1/13
 Drilling Contractor: GeoLogic NY, Inc. Driller: NA



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LOG OF SOIL BORING

Coordinates: Northing 1027345.32 Easting: 1085219.14
 Surface Elevation: 594.45
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job. No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-44
Drilling Method: Slide hammer		Sheet 1 of 1
Sampling Method: MacroCore		Drilling
Water Level:		Start
Time:		Finish
Date:		DATE 07-02-13
		TIME 0800

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:
						Grass, Topsoil
						Weather: overcast
						Temperature: 70F
			0	0		0.0' - 0.3' Dark brown, CLAY, some organic matter, trace silt, moist, soft, high plasticity
	2/2					0.3' - 1.0' Dark brown, CLAY, trace organic matter, trace silt, trace medium to fine sand, soft, moist, high plasticity
			0	1		1' - 2' Brown, fine SAND, and SILT, moist, soft
				2		
				3		
				4		
				5		EOB at 2 ft bgs.
				6		Sampled 0-1 @ 0805
				7		Sampled 1-2 @ 0805
				8		
				9		
				10		
				11		
				12		
				13		
				14		
				15		
				16		
				17		
				18		
				19		
				20		
				21		
				22		
				23		
				24		
				25		
				26		
				27		
				28		
				29		

Monitoring Well Construction Information		Soil Vapor Point Installation Information	
Monitoring Well Diameter: _____ in		Depth of Soil Vapor Point: _____ ft	
Bottom of Monitoring Well: _____ ft bgs		Bottom of Tubing: _____ ft	
Stick Up or Flush Mount: _____		Top of Sand Pack: _____ ft	
Screen Interval: _____ To _____ ft bgs		Top of Bentonite Seal: _____ ft	
Riser Interval: _____ To _____ ft bgs			
Sand Pack Interval: _____ To _____ ft bgs			
Bentonite Seal: _____ To _____ ft bgs			
Grout Interval: _____ To _____ ft bgs			

Logged by: Robert Peterson/Charles Yarrington Date: 07/1/13
 Drilling Contractor: GeoLogic NY, Inc. Driller: NA



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LOG OF SOIL BORING

Coordinates: Northing 1027233.21 Easting: 1085207.78
 Surface Elevation: 596.05
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-45
Drilling Method: Slide hammer		Sheet 1 of 1
Sampling Method: MacroCore		Drilling
Water Level:		Start
Time:		Finish
Date:		DATE 07-02-13
		TIME 0745

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:	
						Tall Grass, Topsoil	
Weather: overcast							
Temperature: 70F							
			0	0		0' - 1'	Dark brown, clayey SILT, some organic matter, trace fine sand, soft, moist
	2/2			1		1' - 2'	Light brown, clayey SILT and fine SAND, trace organic matter
			0	2			
				3			
				4			
				5			EOB at 2 ft bgs.
				6			Sampled 0-1 @ 0750
				7			Sampled 1-2 @ 0750
				8			
				9			
				10			
				11			
				12			
				13			
				14			
				15			
				16			
				17			
				18			
				19			
				20			
				21			
				22			
				23			
				24			
				25			
				26			
				27			
				28			
				29			

Monitoring Well Construction Information Monitoring Well Diameter: _____ in Bottom of Monitoring Well: _____ ft bgs Stick Up or Flush Mount: _____ Screen Interval: _____ To _____ ft bgs Riser Interval: _____ To _____ ft bgs Sand Pack Interval: _____ To _____ ft bgs Bentonite Seal: _____ To _____ ft bgs Grout Interval: _____ To _____ ft bgs		Soil Vapor Point Installation Information Depth of Soil Vapor Point: _____ ft Bottom of Tubing: _____ ft Top of Sand Pack: _____ ft Top of Bentonite Seal: _____ ft	
Logged by: <u>Robert Peterson/Charles Yarrington</u>		Date: <u>07/1/13</u>	
Drilling Contractor: <u>GeoLogic NY, Inc.</u>		Driller: <u>NA</u>	



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LOG OF SOIL BORING

Coordinates: Northing 1027479.1 Easting: 1085393.56
 Surface Elevation: 595.51
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job. No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-46
Drilling Method: Slide hammer		Sheet 1 of 1
Sampling Method: MacroCore		Drilling
Water Level:		Start
Time:		Finish
Date:		DATE 07-02-13
		TIME 0905

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:	
						Grass, Topsoil	
Weather:						overcast	
Temperature:						70F	
			0	0		0.0' - 0.8'	FILL, glass, brick slag/ash, organic matter, trace medium to coarse sand, soft, moist
				1		0.8' - 2'	Gray/dark Brown, clayey SILT, trace organic matter, hard, moist
	2/2		0	1			
				2			
				3			
				4			
				5			EOB at 2 ft bgs.
				6			Sampled 0-1 @ 0910 (MS)
				7			Sampled 1-2 @ 0910
				8			Duplicate 12 collected from 0-1 bgs.
				9			
				10			
				11			
				12			
				13			
				14			
				15			
				16			
				17			
				18			
				19			
				20			
				21			
				22			
				23			
				24			
				25			
				26			
				27			
				28			
				29			

Monitoring Well Construction Information				Soil Vapor Point Installation Information			
Monitoring Well Diameter:	_____	in		Depth of Soil Vapor Point:	_____	ft	
Bottom of Monitoring Well:	_____	ft bgs		Bottom of Tubing:	_____	ft	
Stick Up or Flush Mount:	_____			Top of Sand Pack:	_____	ft	
Screen Interval:	_____	To	_____	Top of Bentonite Seal:	_____	ft	
Riser Interval:	_____	To	_____				
Sand Pack Interval:	_____	To	_____				
Bentonite Seal:	_____	To	_____				
Grout Interval:	_____	To	_____				

Logged by: Robert Peterson/Charles Yarrington Date: 07/1/13
 Drilling Contractor: GeoLogic NY, Inc. Driller: NA



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LOG OF SOIL BORING

Coordinates: Northing 1027344.91 Easting: 1085392.78
 Surface Elevation: 594.55
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job. No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-47
Drilling Method: Slide hammer		Sheet 1 of 1
Sampling Method: MacroCore		Drilling
Water Level:		Start
Time:		Finish
Date:		DATE 07-02-13
		TIME 0840

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:		
						Topsoil		
						Weather: overcast		
						Temperature: 70F		
	2/2		0	0		0.0' - 0.3' Dark brown, silty CLAY, some organic matter, soft, moist		
							0.3' - 0.5' Light brown, fine SAND, some coarse sand, soft, moist.	
					0	1		0.5' - 2' Light brown, SILT, and FINE SAND, trace clay, soft, moist.
						2		
						3		
						4		
						5		EOB at 2 ft bgs.
						6		Sampled 0-1 @ 0845
						7		Sampled 1-2 @ 0845
						8		
						9		
						10		
						11		
						12		
						13		
						14		
						15		
						16		
						17		
						18		
						19		
						20		
						21		
						22		
						23		
						24		
						25		
						26		
						27		
				28				
				29				

Monitoring Well Construction Information Monitoring Well Diameter: _____ in Bottom of Monitoring Well: _____ ft bgs Stick Up or Flush Mount: _____ Screen Interval: _____ To _____ ft bgs Riser Interval: _____ To _____ ft bgs Sand Pack Interval: _____ To _____ ft bgs Bentonite Seal: _____ To _____ ft bgs Grout Interval: _____ To _____ ft bgs		Soil Vapor Point Installation Information Depth of Soil Vapor Point: _____ ft Bottom of Tubing: _____ ft Top of Sand Pack: _____ ft Top of Bentonite Seal: _____ ft	
Logged by: <u>Robert Peterson/Charles Yarrington</u>		Date: <u>07/1/13</u>	
Drilling Contractor: <u>GeoLogic NY, Inc.</u>		Driller: <u>NA</u>	



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LOG OF SOIL BORING

Coordinates: Northing 1027478.02 Easting: 1085225.14
 Surface Elevation: 595.26
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: Slide hammer		Soil Boring Number: SB-43A
Sampling Method: MacroCore		Sheet 1 of 1
Drilling		
Water Level:		Start
Time:		Finish
Date:		DATE 08-13-13
		TIME 1010

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions:	
				in Feet		Grass	Weather:
							Cloudy
							70F
	2/2		0	0	0.0' - 0.2'	D. Brown silty SAND, trace angular gravel, loose, moist	
				0.3' - 1'	Reddish brown silty SAND and non-melted glass and slag, loose, moist		
			0	1	1' - 2'	Grey silty CLAY, mottled, stiff, moist.	
					2' - 3'	Light brownish tan clayey SILT, mottled, non-cohesive, moist.	
					2		
					3		
					4		Re-installed. Original SB-43 was not deep enough for vertical delineation
					5		
					6		
					7		
					8		
					9		
					10		
					11		
					12		
					13		
					14		
					15		
					16		
					17		
					18		
					19		
					20		
					21		
					22		
					23		
					24		
					25		
					26		
			27				
			28				
			29				

Logged by: Robert Peterson/Charles Yarrington Date: 8/13/13
 Drilling Contractor: NA Driller: NA



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LOG OF SOIL BORING

Coordinates: Northing 1027204.49 Easting: 1085457.91
Surface Elevation: 595.64
Casing Below Surface: _____
Reference Elevation: _____
Reference Description: _____ Surface Elevation

Job No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: Slide hammer		Soil Boring Number: SB-49
Sampling Method: MacroCore		Sheet 1 of 1
Drilling		
Water Level:		Start
Time:		Finish
Date:		DATE 08-13-13
		TIME 0945

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:		
						Tall grass		
						Weather:		
						Sunny		
						Temperature:		
						70F		
	2/2		0	0	0.0' - 0.2'	Dark brown silty SAND, trace organic matter, loose, moist		
					0.3' - 1.5'	Dark brown silty fine SAND, loose, moist		
				0	1	1.5' - 2'	Light brown mottled SILT, stiff, moist	
					2	NO FILL		
					3			
					4			
					5	MS/MSD collected from 0-1 interval		
					6			
					7			
					8			
					9			
					10			
					11			
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19			
					20			
					21			
					22			
					23			
					24			
					25			
					26			
					27			
				28				
				29				

Logged by: Robert Peterson/Charles Yarrington Date: 8/13/13
 Drilling Contractor: NA Driller: NA



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LOG OF SOIL BORING

Coordinates: Northing 1027465.9 Easting: 1085499.15
 Surface Elevation: 595.79
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: Slide hammer		Soil Boring Number: SB-50
Sampling Method: MacroCore		Sheet 1 of 1
Drilling		
Water Level:		Start
Time:		Finish
Date:		DATE 08-13-13 DATE 08-13-13
		TIME 0914 TIME 0916

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions:		
				in Feet		Grass	Weather:	
						Temperature:	70F	
	2/2		0	0		0.0' - 0.2'	Dark brown, sandy SILT, with organic matter, loose, moist.	
			0	1		0.3' - 1.0'	Brown clayey SILT with angular and rounded glass, slag, and wood, loose, moist	
			0	1		1.0' - 2'	Light brown, clayey SILT, mottled, trace roots, stiff, moist	
				2				
				3				
				4				
				5				Duplicate 13 collected from 0-1 interval
				6				
				7				
				8				
				9				
				10				
				11				
				12				
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				
				21				
				22				
				23				
				24				
				25				
				26				
				27				
				28				
			29					

Logged by: Robert Peterson/Charles Yarrington Date: 8/13/13
 Drilling Contractor: NA Driller: NA



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LOG OF SOIL BORING

Coordinates: Northing 1027471.95 Easting: 1085651.51
 Surface Elevation: 596.96
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job. No. 1490710	Client: NYSDEC	Location: Lackawanna, NY	
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-51	
Drilling Method: Slide hammer		Sheet 1 of 1	
Sampling Method: MacroCore		Drilling	
Water Level:		Start	Finish
Time:		DATE 08-13-13	DATE 08-13-13
Date:		TIME 0845	TIME 0850

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions:					
				in Feet		Grass	Weather:				
						Cloudy	Temperature:				
						70F					
	2/2		0	0		0.0' - 0.2'	Dark brown, silty fine SAND, trace organic matter, loose, moist				
				0.3' - 1.5'		Reddish brown sandy SILT, medium gravel, some rounded and angular glass, trace slag and plastic, loose, moist					
				1		1.5' - 2'	Greyish brown clayey SILT, trace organic matter, mottled, stiff, moist.				
							2				
							3				
							4				
							5				
							6				
							7				
							8				
							9				
							10				
							11				
							12				
							13				
							14				
							15				
							16				
							17				
							18				
							19				
							20				
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
			29								

Logged by: Robert Peterson/Charles Yarrington Date: 8/13/13
 Drilling Contractor: NA Driller: NA



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LOG OF SOIL BORING

Coordinates: Northing 1027472.54 Easting: 1085725.17
Surface Elevation: 597.56
Casing Below Surface: _____
Reference Elevation: _____
Reference Description: _____ Surface Elevation

Job No. 1490710 **Client:** NYSDEC
Project: Lackawanna Incinerator Site
Drilling Method: Slide hammer
Sampling Method: MacroCore
Water Level: _____
Time: _____
Date: _____

Location: Lackawanna, NY
Soil Boring Number: SB-52
Sheet 1 of 1
Drilling
Start **Finish**
 DATE 08-13-13 DATE 08-13-13
 TIME 0905 TIME 0910

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:	Weather:	Temperature:		
	2/2		0	0		Grass	Cloudy	70F		
					0.0' - 0.2'	Dark brown silty fine SAND and BRICK, trace organic matter, loose, moist				
					0.3' - 1.5'	Reddish brown silty SAND and melted glass with slag and brick, loose, moist				
					0	1		1.5' - 2'	Greyish brown clayey SILT trace organics, mottled, firm, moist	
						2				
						3				
						4				
						5				
						6				
						7				
						8				
						9				
						10				
						11				
						12				
						13				
						14				
						15				
						16				
						17				
						18				
						19				
						20				
						21				
						22				
						23				
						24				
						25				
						26				
						27				
				28						
				29						

Logged by: Robert Peterson/Charles Yarrington Date: 8/13/13
 Drilling Contractor: NA Driller: NA



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LOG OF SOIL BORING

Coordinates: Northing 1027473.78 Easting: 1085787.83
 Surface Elevation: 596.53
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job. No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: Slide hammer		Soil Boring Number: SB-53
Sampling Method: MacroCore		Sheet 1 of 1
Water Level:		Drilling
Time:		Start Finish
Date:		DATE 08-13-13 DATE 08-13-13
		TIME 0833 TIME 0835

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth		USCS Log	Surface Conditions:	
				in	Feet		Grass	Weather:
			0	0			0.0' - 0.2'	Brown, silty fine SAND, loose, moist
	2/2		0	1			0.3' - 2'	Brown, sandy SILT with angular glass and slag, loose, moist
				2				
				3				
				4				
				5				
				6				
				7				
				8				
				9				
				10				
				11				
				12				
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				
				21				
				22				
				23				
				24				
				25				
				26				
				27				
				28				
				29				

Logged by: Robert Peterson/Charles Yarrington Date: 8/13/13
 Drilling Contractor: NA Driller: NA



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LOG OF SOIL BORING

Coordinates: Northing 1027468.377 Easting: 1086152.454
 Surface Elevation: 599.22
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-55
Drilling Method: Geoprobe		Sheet 1 of 1
Sampling Method: MacroCore		Drilling
Water Level:		Start
Time:		Finish
Date:		DATE 02-24-14
		DATE 02-24-14
		TIME 1050
		TIME 1100

Blow Counts (140-lb)	Ft. Driven/ Recvrd	Boring Diagram	PID (ppm)	Depth in Feet	USCS Log	Surface Conditions:		
						grass/topsoil		
						Weather:		
						Snowing, very windy		
						Temperature:		
						20F		
	4/3		0	0		0' - 5'	Brown silty SAND, trace organics, frozen	
			0	1		5' - 2.5'	[FILL] Grey coarse subangular gravel and ash	
			0	2		2.5' - 3'	[FILL] Reddish brown fill, silt, glass, slag	
			3					
			4		4' - 8'	No recovery (presumed fill based on rig behavior)		
	4/0			5				
				6				
				7				
			0	8		8' - 10'	[FILL] Reddish brown fill, silt, glass, slag	
	4/4			0	9			
				0	10		10' - 12'	[NATIVE] Grey CLAY, cohesive, tight, moist
				0	11		EOB @ 12'	
					12		Samples SB-55 (0-1) 1055 (1-2)	
				13		(2-3)		
			14		(10-11)			

Logged by: Charles Yarrington Date: 2/24/14
 Drilling Contractor: Geologic Driller: Geologic



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LOG OF SOIL BORING

Coordinates: Northing 1027502.283 Easting: 1086286.865
 Surface Elevation: 596.30
 Casing Below Surface: _____
 Reference Elevation: _____
 Reference Description: _____ Surface Elevation

Job No. 1490710	Client: NYSDEC	Location: Lackawanna, NY
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-56
Drilling Method: Geoprobe		Sheet 1 of 1
Sampling Method: MacroCore		Drilling
Water Level:		Start
Time:		Finish
Date:		DATE 02-24-14
		DATE 02-24-14
		TIME 1115
		TIME 1125

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions:	
				in		Feet	grass/topsoil
	4/3		0	0			
			0	1			
			0	2		2' - 4'	[NATIVE] Light brown silty CLAY, cohesive, moist
				3			
				4			
				5			
				6			
				7			
				8			
				9			
				10			
				11			EOB @ 4'
				12			Samples SB-56 (0-1) 1125 (1-2)
				13			(2-3) (3-4)
		14			(1-2) MS (1-2) MSD		

Logged by: Charles Yarrington Date: 2/24/14
 Drilling Contractor: Geologic Driller: Geologic



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LOG OF SOIL BORING

Coordinates: Northing 1027514.09 Easting: 1086451.646
Surface Elevation: 596.82
Casing Below Surface: _____
Reference Elevation: _____
Reference Description: _____ Surface Elevation

Job No. 1490710	Client: NYSDEC	Location: Lackawanna, NY	
Project: Lackawanna Incinerator Site		Soil Boring Number: SB-57	
Drilling Method: Geoprobe		Sheet 1 of 1	
Sampling Method: MacroCore		Drilling	
Water Level:		Start	Finish
Time:		DATE 02-24-14	DATE 02-24-14
Date:		TIME 1130	TIME 1135

Blow Counts (140-lb)	Ft. Driven/ Recvr'd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions:			
				in Feet		grass/topsoil			
						Weather: Snowing, very windy			
						Temperature: 20F			
	4/3		0	0	0' - 1'	[NATIVE] Dark brown sandy SILT, some subangular gravel, trace glass			
			0	1	1' - 3'	[NATIVE] Brown silty CLAY, cohesive, moist, with reddish brown mottling			
			0	2					
				3					
				4					
				5					
				6					
				7					
				8					
				9					
				10					
				11			EOB @ 4'		
				12			Samples SB-57 (0-1)		
				13			1135 (1-2)		
		14			(2-3)				

Logged by: Charles Yarrington Date: 2/24/14
 Drilling Contractor: Geologic Driller: Geologic



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LOG OF SOIL BORING

Coordinates: Northing 1027515.26 Easting: 1086629.182
Surface Elevation: 597.03
Casing Below Surface: _____
Reference Elevation: _____
Reference Description: _____ Surface Elevation

Job. No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator Site	Location: Lackawanna, NY
Drilling Method: Geoprobe		Soil Boring Number: SB-58
Sampling Method: MacroCore		Sheet 1 of 1
Water Level:		Drilling
Time:		Start DATE 02-24-14
Date:		Finish DATE 02-24-14
		TIME 1140
		TIME 1150

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions:
				in Feet		grass/topsoil
						Weather:
						Temperature:
	4/3		0	0		0' - 1' [NATIVE] Brown sandy SILT, trace subangular gravel, loose, moist
			0	1		1' - 3' [NATIVE] Brown sandy CLAY, cohesive, moist
			0	2		
				3		
				4		
				5		
				6		
				7		
				8		
				9		
				10		
				11		EOB @ 4'
				12		Samples SB-58 (0-1) 1150 (1-2)
				13		(2-3) (1-2) MS
		14		(1-2) MSD Duplicate01022414 from 2-3		

Logged by: Charles Yarrington Date: 2/24/14
 Drilling Contractor: Geologic Driller: Geologic



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LOG OF SOIL BORING

Coordinates: Northing 1027514.785 Easting: 1086771.977
Surface Elevation: 598.47
Casing Below Surface: _____
Reference Elevation: _____
Reference Description: _____ Surface Elevation

Job No. 1490710 **Client:** NYSDEC
Project: Lackawanna Incinerator Site

Location:
 Lackawanna, NY

Drilling Method: Geoprobe

Soil Boring Number:
 SB-59

Sampling Method: MacroCore

Sheet 1 of 1

Water Level: _____
Time: _____
Date: _____

Drilling
Start **Finish**
 DATE 02-24-14 DATE 02-24-14
 TIME 1155 TIME 1205

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions:
				in Feet		grass/topsoil
						Weather:
						Temperature:
	4/2		0	0		0' - 1' [NATIVE] Brown silty SAND, trace angular gravel, moist
			0	1		1' - 2' [NATIVE] Brown silty SAND, tight, moist, orange mottling
				2		
				3		
				4		
				5		
				6		
				7		
				8		
				9		
				10		
				11		EOB @ 4'
				12		Samples SB-59 (0-1) 1205 (1-2)
				13		Duplicate02022414 collected from 1-2
		14				

Logged by: Charles Yarrington
 Drilling Contractor: Geologic

Date: 2/24/14
 Driller: Geologic



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LOG OF SOIL BORING

Coordinates: Northing 1027570.398 Easting: 1086972.942
Surface Elevation: 597.58
Casing Below Surface: _____
Reference Elevation: _____
Reference Description: _____ Surface Elevation

Job No. 1490710 **Client:** NYSDEC
Project: Lackawanna Incinerator Site

Location:
 Lackawanna, NY

Drilling Method: Geoprobe

Soil Boring Number:
 SB-60

Sampling Method: MacroCore

Sheet 1 of 1

Water Level: _____
Time: _____
Date: _____

Drilling
Start **Finish**
 DATE 02-24-14 DATE 02-24-14
 TIME 1210 TIME 1215

Blow Counts (140-lb)	Ft. Driven/ Ft. Recvrd	Boring Diagram	PID (ppm)	Depth	USCS Log	Surface Conditions:
				in		Feet
	2/2		0	0		Weather: Snowing, very windy
			0	1		Temperature: 20F
			2		0' - 2' [NATIVE] Brown silty CLAY, cohesive, moist, trace organics	
			3			
			4			
			5			
			6			
			7			
			8			
			9			
			10			
			11		EOB @ 2'	
			12		Samples SB-60 (0-1) 1215 (1-2)	
			13			
			14			

Logged by: Charles Yarrington
 Drilling Contractor: Geologic

Date: 2/24/14
 Driller: Geologic