



EA Engineering, P.C.
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Log of Sediment Sample Collection

Coordinates: Northing: 1027521.722 Easting: 1084773.478
Surface Water Elevation: N/A
Reference Elevation: N/A
Reference Description: N/A

Job. No. 1490710	Client: NYSDEC	Location Lackawanna, NY	
Project: Lackawanna Incinerator		Sample Location ID: 915206-SD-03	
Sampling Location Description: At base of larger eastern outfall, where outfall meets Smoke Creek		Sheet 1 of 1	
Sample Method: Scoop into bowl		Sampling Date/Time	
Depth of Water Body: N/A		Start	Finish
Width of Water Body: N/A		18-Oct-12	18-Oct-12
Water Body Location Smokes Creek		TIME 12:00	TIME 12:15
Lackawanna, NY			

	Water Quality Parameters							Surface Conditions:
	Time	pH	Cond.	Turb.	DO	Temp	ORP	Weather:
	(hrs)	(pH units)	(mS/cm)	(ntu)	(mg/L)	(°C)	(mV)	Description of Sediment
Water quality parameters collected from Smokes Creek	1227	7.73	0.615	66.2	10.22	12.46	149	Grab sample from top 0-6 inches Brown; SANDY to coarser granular sediment, not much silt present

Total Quantity of Water Removed (gal): N/A
Samplers: FD/HW
Sampling Date: 10/18/2012

Sampling Time: 1210
Split Sample With: N/A
Sample Type: Composite



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Log of Sediment Sample Collection

Coordinates: Northing: 1027517.579 Easting: 1084520.714
Surface Water Elevation: N/A
Reference Elevation: 581.23
Reference Description: Ground Surface

Job. No.	Client:	Location	
1490710	Project:	Lackawanna, NY	
Sampling Location Description:		Sample Location ID:	
Outfall base (where outfall meets Smoke Creek), western edge of site		915206-SD-04	
Sample Method:		Sheet 1 of 1	
Depth of Water Body:		Sampling Date/Time	
N/A			
Width of Water Body:		Start	Finish
N/A		18-Oct-12	18-Oct-12
Water Body Location		TIME 12:20	TIME
Lackawanna, NY			

	Water Quality Parameters							Surface Conditions:
	Time	pH	Cond.	Turb.	DO	Temp	ORP	N/A
	(hrs)	(pH units)	(mS/cm)	(ntu)	(mg/L)	(°C)	(mV)	Weather: Cloudy, ~62 degrees F
Water quality parameters collected from Smokes Creek	Description of Sediment							
	1225	7.81	0.61	36.9	10.39	12.66	155	Grab sample from top 0-6 inches Brown; SANDY to granular, not much silt present

Total Quantity of Water Removed (gal): N/A
Samplers: FD/HW
Sampling Date: 10/18/2012

Sampling Time: 1230
Split Sample With: N/A
Sample Type: Composite



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Log of Sediment Sample Collection

Coordinates: Northing: 1027521 Easting: 1084905.315
Surface Water Elevation: N/A
Reference Elevation: 582.85
Reference Description: Ground Surface

Job. No. 1490710	Client: NYSDEC	Location Lackawanna, NY	
Project: Lackawanna Incinerator		Sample Location ID: 915206-SD-05A	
Sampling Location Description: ~100 feet upstream of cement culvert on southern bank of creek		Sheet 1 of 1	
Sample Method: hand driven macrocore		Sampling Date/Time	
Depth of Water Body: N/A		Start	Finish
Width of Water Body: N/A		18-Oct-12	18-Oct-12
Water Body Location Smokes Creek		TIME 11:07	TIME 11:20
Lackawanna, NY			

	Water Quality Parameters							Surface Conditions:
	Time	pH	Cond.	Turb.	DO	Temp	ORP	N/A
	(hrs)	(pH units)	(mS/cm)	(ntu)	(mg/L)	(°C)	(mV)	Weather: Cloudy, ~60 degrees F
Water quality parameters collected from Smokes Creek	1115	7.75	0.559	7.9	9.34	11.68	148	Description of Sediment Collect samples from 0-6 inches using scoop technique with cores Only top 4-5 inches sediment, then hit clay layer Gray with some light brown on top: SILT, some SAND; light gray CLAY layer; stiff

Total Quantity of Water Removed (gal): N/A
Samplers: FD/HW
Sampling Date: 10/18/2012

Sampling Time: 1120
Split Sample With: N/A
Sample Type: Composite



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Log of Sediment Sample Collection

Coordinates: Northing: 1027554.811 Easting: 1084903.96
Surface Water Elevation: N/A
Reference Elevation: 583.27
Reference Description: Ground Surface

Job. No. 1490710	Client: NYSDEC	Location Lackawanna, NY	
Project: Lackawanna Incinerator		Sample Location ID: 915206-SD-05B	
Sampling Location Description: ~100 feet upstream of cement culvert on northern bank of creek		Sheet 1 of 1	
Sample Method: hand driven macrocore		Sampling Date/Time	
Depth of Water Body: N/A		Start	Finish
Width of Water Body: N/A		18-Oct-12	18-Oct-12
Water Body Location Smokes Creek		TIME 11:34	TIME
Lackawanna, NY			

	Water Quality Parameters							Surface Conditions:
	Time	pH	Cond.	Turb.	DO	Temp	ORP	N/A
	(hrs)	(pH units)	(mS/cm)	(ntu)	(mg/L)	(°C)	(mV)	Weather: Cloudy, ~60 degrees F
Water quality parameters collected from Smokes Creek	1134	7.72	0.599	6.9	8.59	11.83	158	Description of Sediment Collect samples from 0-6 inches, sediment only in upper 4 inches Dark gray; SILTY, some SAND; light gray/brown CLAY layer
	1145	7.74	0.599	8.9	9.19	11.82	161	

Total Quantity of Water Removed (gal): N/A
Samplers: FD/HW
Sampling Date: 10/18/2012

Sampling Time: 1155
Split Sample With: N/A
Sample Type: Composite



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Log of Sediment Sample Collection

Coordinates: Northing: 1027520.995 Easting: 1084747.789
Surface Water Elevation: N/A
Reference Elevation: 583.36
Reference Description: Ground Surface

Job. No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator	Location Lackawanna, NY
Sampling Location Description: 50 feet downstream from cement culvert on southern bank of creek		Sample Location ID: 915206-SD-06A
Sample Method: hand driven macrocore		Sheet 1 of 1
Depth of Water Body: N/A		Sampling Date/Time
Width of Water Body: N/A		Start 18-Oct-12
Water Body Location Smokes Creek Lackawanna, NY		Finish 18-Oct-12 TIME 10:05 TIME 10:30

	Water Quality Parameters							Surface Conditions:
	Time	pH	Cond.	Turb.	DO	Temp	ORP	Weather:
	(hrs)	(pH units)	(mS/cm)	(ntu)	(mg/L)	(°C)	(mV)	Description of Sediment
Water quality parameters collected from Smokes Creek	1018	7.76	0.608	5.2	14.28	11.53	180	Core of 0-6 inches: only top 0-4 inches is sediment, rest is clay Used scoop technique to get top layer sediments - not a thick layer on southern bank Sediment: light brown to light gray with some darker gray; SILTY SAND; gray CLAY layer; stiff

Total Quantity of Water Removed (gal): N/A
Samplers: FD/HW
Sampling Date: 10/18/2012

Sampling Time: 1030
Split Sample With: N/A
Sample Type: Composite



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Log of Sediment Sample Collection

Coordinates: Northing: 1027559.883 Easting: 1084745.652
Surface Water Elevation: N/A
Reference Elevation: 581.42
Reference Description: Ground Surface

Job. No. 1490710	Client: NYSDEC	Location Lackawanna, NY
Project: Lackawanna Incinerator		Sample Location ID: 915206-SD-06B
Sampling Location Description: 50 feet downstream from cement culvert on northern bank of creek		Sheet 1 of 1
Sample Method: hand driven macrocore		Sampling Date/Time
Depth of Water Body: N/A		Start
Width of Water Body: N/A		Finish
Water Body Location Smokes Creek		18-Oct-12
Lackawanna, NY		18-Oct-12
		TIME 10:34
		TIME 10:55

	Water Quality Parameters							Surface Conditions:
	Time	pH	Cond.	Turb.	DO	Temp	ORP	N/A
	(hrs)	(pH units)	(mS/cm)	(ntu)	(mg/L)	(°C)	(mV)	Weather: Sun, clouds, ~60 degrees F
Water quality parameters collected from Smokes Creek	Description of Sediment							
	1034	7.74	0.607	5.9	15.29	11.52	184	Sediment collected from 0-6 inches - only top 3-4 inches was good sediment Lighter brown; SILTY, some SAND, organic matter present; Gray CLAY layer; stiff
	1040	7.73	0.607	4.4	14.36	11.51	185	

Total Quantity of Water Removed (gal): N/A
Samplers: FD/HW
Sampling Date: 10/18/2012

Sampling Time: 1055
Split Sample With: N/A
Sample Type: Composite



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Log of Sediment Sample Collection

Coordinates: Northing: 1027508.372 Easting: 1084653.695
Surface Water Elevation: N/A
Reference Elevation: 582.98
Reference Description: Ground Surface

Job. No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator	Location Lackawanna, NY
Sampling Location Description: Floodplain sample, southern bank of creek		Sample Location ID: 915206-SD-06FP
Sample Method: trowel into bowl		Sheet 1 of 1
Depth of Water Body: N/A		Sampling Date/Time
Width of Water Body: N/A		Start 18-Oct-12
Water Body Location Smokes Creek Lackawanna, NY		Finish 18-Oct-12 TIME 12:30

	Water Quality Parameters							Surface Conditions:
	Time	pH	Cond.	Turb.	DO	Temp	ORP	Weather:
	(hrs)	(pH units)	(mS/cm)	(ntu)	(mg/L)	(°C)	(mV)	Description of Sediment
No water quality parameters collected	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Floodplain sample near transect SD-06 - between two culverts Cleared vegetation, then used trowel covered in bowl liner to collect sediment from 0-4 inches No equipment blank collected since dedicated liner was used to sample sediment
								Light brown; organic matter, some roots; loose; slightly moist

Total Quantity of Water Removed (gal): N/A
Samplers: FD/HW
Sampling Date: 10/18/2012

Sampling Time: 1235
Split Sample With: N/A
Sample Type: Composite



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Log of Sediment Sample Collection

Coordinates: Northing: 1027518.276 Easting: 1084469.171
Surface Water Elevation: N/A
Reference Elevation: 583.07
Reference Description: Ground Surface

Job. No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator	Location Lackawanna, NY
Sampling Location Description: 50 ft downstream from westernmost culvert on southern creek bank		Sample Location ID: 915206-SD-07A
Sample Method: hand driven macrocore		Sheet 1 of 1
Depth of Water Body: N/A		Sampling Date/Time
Width of Water Body: N/A		Start 18-Oct-12
Water Body Location Smokes Creek		Finish 18-Oct-12
Lackawanna, NY		TIME 08:15 TIME 09:00

	Water Quality Parameters							Surface Conditions:
	Time (hrs)	pH (pH units)	Cond. (mS/cm)	Turb. (ntu)	DO (mg/L)	Temp (°C)	ORP (mV)	N/A
Water quality parameters collected from Smokes Creek	830	8.06	0.617	4.1	7.96	12.56	124	Weather: Cool, sunny, ~55 degrees F
	900	7.82	0.61	4	7.63	11.57	166	Description of Sediment Sediment collected from 0-6 inches Cores taken down to clay layer - only seeing a few inches of sediment in each core Composited in bowl, decanted water off top Sediment: Light gray / brown; SILTY with organic matter; light gray CLAY layer; stiff

Total Quantity of Water Removed (gal): N/A
Samplers: FD / HW
Sampling Date: 10/18/2012

Sampling Time: 900
Split Sample With: N/A
Sample Type: Composite



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Log of Sediment Sample Collection

Coordinates: Northing: 1027554.378 Easting: 1084469.454
Surface Water Elevation: N/A
Reference Elevation: 582.2
Reference Description: Ground Surface

Job. No. 1490710	Client: NYSDEC	Location Lackawanna, NY	
Project: Lackawanna Incinerator		Sample Location ID: 915206-SD-07B	
Sampling Location Description: 50 ft downstream from westernmost culvert on northern creek bank		Sheet 1 of 1	
Sample Method: hand driven macrocore		Sampling Date/Time	
Depth of Water Body: N/A		Start	Finish
Width of Water Body: N/A		18-Oct-12	18-Oct-12
Water Body Location Smokes Creek		TIME 9:10	TIME 09:30
Lackawanna, NY			

	Water Quality Parameters							Surface Conditions:
	Time	pH	Cond.	Turb.	DO	Temp	ORP	Weather:
	(hrs)	(pH units)	(mS/cm)	(ntu)	(mg/L)	(°C)	(mV)	Description of Sediment
Water quality parameters collected from Smokes Creek	916	7.82	0.611	3.9	7.29	11.46	168	Core shows much greater sediment layer than southern bank Scoop technique to get sediment off top layer Top 0-6 inches sediment, below is clay layer
	923	7.76	0.611	3.7	7.15	11.45	167	Sediment: Dark gray; lots of organic matter, Silt with some SAND; light gray CLAY layer; stiff

Total Quantity of Water Removed (gal): N/A
Samplers: FD/HW
Sampling Date: 10/18/2012

Sampling Time: 930
Split Sample With: Duplicate / MS/MSD
Sample Type: Composite



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Log of Sediment Sample Collection

Coordinates: Northing: N/A Easting: N/A
Surface Water Elevation: N/A
Reference Elevation: N/A
Reference Description: N/A

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

Location
Lackawanna, NY

Sampling Location Description:

Smokes Creek

Sample Method: MacroCore Scoop

Depth of Water Body: N/A

Width of Water Body: N/A

Water Body Location Smokes Creek

Lackawanna, NY

Sample Location ID:

915206-SD-08

Sheet 1 of 1

Sampling Date/Time

Start Finish

DATE 4/16/13 DATE 4/16/13

TIME 1220 TIME 1230

Water Quality Parameters

Time (hrs)	pH (pH units)	Cond. (mS/cm)	Turb. (ntu)	DO (mg/L)	Temp (°C)	ORP (mV)
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WQ parameters collected
from Smokes Creek

1222	8.65	0.641	0	10.32	14.08	199
1226	8.45	0.646	0	9.87	13.55	198

Surface Conditions:

Weather: Cloudy, Rain, 50F

Description of Sediment

Gray, SILT and CLAY, some organic matter. (wet) [soft].

Total Quantity of Water Removed (gal): na
Samplers: RP/CY
Sampling Date: 4/16/2013

Sampling Time: 1230
Split Sample With: MSMSD/Duplicate
Sample Type: grab



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Log of Sediment Sample Collection

Coordinates:

Northing: N/A Easting: N/A

Surface Water Elevation:

N/A

Reference Elevation:

N/A

Reference Description:

N/A

Job. No.	Client:	Location	
1490710	Project:	Lackawanna, NY	
Smoking Location Description:		Sample Location ID:	
Smokes Creek		915206-SD-09	
Sample Method:		Sheet 1 of 1	
MacroCore Scoop			
Depth of Water Body:		Sampling Date/Time	
N/A			
Width of Water Body:		Start	Finish
N/A			
Water Body Location		DATE 4/16/13	DATE 4/16/13
Smokes Creek			
Lackawanna, NY		TIME 1210	TIME 1218

	Water Quality Parameters							Surface Conditions:
	Time	pH	Cond.	Turb.	DO	Temp	ORP	Weather:
	(hrs)	(pH units)	(mS/cm)	(ntu)	(mg/L)	(°C)	(mV)	Description of Sediment
WQ parameters collected from Smokes Creek	1210	9.45	0.67	0	13.07	14.33	182	Gray, CLAY, some silt, some organic matter. (wet) [soft].
	1215	9.09	0.648	0	11.39	13.66	189	

Total Quantity of Water Removed (gal): na
Samplers: RP/CY
Sampling Date: 4/16/2013

Sampling Time: 1218
Split Sample With: na
Sample Type: grab



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Log of Sediment Sample Collection

Coordinates: Northing: 1027512.107 Easting: 1084705.026
Surface Water Elevation: N/A
Reference Elevation: 582.941473
Reference Description: Ground Surface

Job. No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator	Location Lackawanna, NY	
Sampling Location Description: Smokes Creek Floodplain		Sample Location ID: 915206-SD-10FP	
Sample Method: MacroCore Scoop		Sheet 1 of 1	
Depth of Water Body: N/A		Sampling Date/Time	
Width of Water Body: N/A		Start	Finish
Water Body Location Smokes Creek Lackawanna, NY		DATE 4/15/13 TIME 1448	DATE 4/15/13 TIME 1455

	Water Quality Parameters							Surface Conditions: Tall Grass, Topsoil
	Time	pH	Cond.	Turb.	DO	Temp	ORP	Weather: Sunny, 60F
	(hrs)	(pH units)	(mS/cm)	(ntu)	(mg/L)	(°C)	(mV)	Description of Sediment
No water quality parameters collected	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4/4 Recovery - Brown, CLAY, trace silt, trace organics, high plasticity, soft, moist

Total Quantity of Water Removed (gal): na
Samplers: RP/CY
Sampling Date: 4/15/2013

Sampling Time: 1455
Split Sample With: na
Sample Type: composite



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Log of Sediment Sample Collection

Coordinates: Northing: 1027510.145 Easting: 1084589.265
Surface Water Elevation: N/A
Reference Elevation: 582.798802
Reference Description: Ground Surface

Job. No. 1490710	Client: NYSDEC	Location Lackawanna, NY	
Project: Lackawanna Incinerator		Sample Location ID: 915206-SD-11FP	
Sampling Location Description: Smokes Creek Floodplain		Sheet 1 of 1	
Sample Method: MacroCore Scoop		Sampling Date/Time	
Depth of Water Body: N/A		Start	Finish
Width of Water Body: N/A		DATE 4/15/13	DATE 4/15/13
Water Body Location Smokes Creek		TIME 1448	TIME 1455
Lackawanna, NY			

	Water Quality Parameters							Surface Conditions:
	Time	pH	Cond.	Turb.	DO	Temp	ORP	Tall Grass, Topsoil
	(hrs)	(pH units)	(mS/cm)	(ntu)	(mg/L)	(°C)	(mV)	Sunny, 60F
No water quality parameters collected	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Description of Sediment
								4/3 Recovery - Brown, CLAY, trace silt, trace organics (soft) [moist]

Total Quantity of Water Removed (gal): na
Samplers: RP/CY
Sampling Date: 4/15/2013

Sampling Time: 1435
Split Sample With: na
Sample Type: composite



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Log of Sediment Sample Collection

Coordinates: Northing: 1027510.922 Easting: 1084446.726
Surface Water Elevation: N/A
Reference Elevation: 582.815895
Reference Description: Ground Surface

Job. No. 1490710	Client: NYSDEC Project: Lackawanna Incinerator	Location Lackawanna, NY
Sampling Location Description: Smokes Creek Floodplain		Sample Location ID: 915206-SD-12FP
Sample Method: MacroCore Scoop		Sheet 1 of 1
Depth of Water Body: N/A		Sampling Date/Time
Width of Water Body: N/A		Start
Water Body Location Smokes Creek		Finish
Lackawanna, NY		DATE 4/15/13
		TIME 1410

	Water Quality Parameters							Surface Conditions: Tall Grass, Topsoil
	Time (hrs)	pH (pH units)	Cond. (mS/cm)	Turb. (ntu)	DO (mg/L)	Temp (°C)	ORP (mV)	Weather: Sunny, 60F
	Description of Sediment							
No water quality parameters collected	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4/3 Recovery - Brown, silty CLAY, trace silt, some organics (soft) [moist]

Total Quantity of Water Removed (gal): na
Samplers: RP/CY
Sampling Date: 4/15/2013

Sampling Time: 1415
Split Sample With: na
Sample Type: composite