File: Homer MGP Site

META Environmental, Inc.

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February 26, 2001

Mr. Tracy Blazicek
New York State Electric and Gas Corporation
Corporate Drive-Kirkwood Industrial Park
P.O. Box 5224
Binghamton, NY 13902-5224

RECEIVED
JUL 2 8 2006
Remedial Bureau C
Division of Environmental Remediation

Dear Tracy:

Enclosed are the data, sampling locations, and a description of the background PAH work completed in Cortland last November. A total of 35 sites were sampled at two different depths, 0 to 1 inch and 1 to 6 inches. These sites were scattered across the Cortland area and are shown in Figure 1. The sampling sites consisted of schools, parks, commercial and industrial properties, city right-of-ways, and vacant lots. The sites sampled included 4 residential sites, 18 municipal/public sites, 12 commercial/industrial sites, and 1 undeveloped site. The site classification and a short description of each site are shown found in Table 1.

All samples collected were analyzed for total organic carbon (TOC) content. The TOC contents of all the samples collected at Cortland are presented in Table 1. The TOC of the Cortland surface soil samples ranged from 8,730 mg/kg to 39,400 mg/kg with an average of 23,900 mg/kg. These values are typical for surface soils. TOC is used to calculate the New York State Recommended Cleanup Objectives (NYS RCOs) for soil. The NYS RCOs for PAHs can be found in TAGM 4046, Appendix A. The PAH RCO values were adjusted for TOC by multiplying the average percent TOC (2.4%) found in the Cortland soil samples with the ROC values found in TAGM 4046. These numbers are seen on page 15 of Table 2. PAH concentrations above the NYS RCOs values and the United States Environmental Protection Agency (US EPA) Residential and Industrial Risk-Based Concentrations (RBCs) are highlighted in Table 2. The least stringent standard that was exceeded is highlighted in the table. For example, blue highlights the concentrations above US EPA Industrial RBCs, which are greater than the NYS RCOs and US EPA Residential RBCs.

Relatively high concentrations of PAHs were found scattered throughout the city. Sites that contained total PAHs above the NYS RCO include Site 17, Site 21, Site 22, Site 23, Site 26, Site 28, Site 29, and Site 32. These sites represent residential, commercial/industrial, and municipal/public areas. The average total PAH concentration from all of the samples collected in Cortland is 9.91 mg/kg. The sample with the highest concentration of PAHs was collected at Site 32, which is located behind Cortland City

High School near the football fields. The total PAHs in this soil sample, which was collected from 1 to 6 inches was 134 mg/kg and has several US EPA Industrial RBC exceedances. The sample that had the lowest total PAH concentration was collected at Site 16, which was in Beaudry Park. This sample was collected from 0 to 1 inch, had a total PAH concentration of 0.214 mg/kg, and no regulatory exceedances.

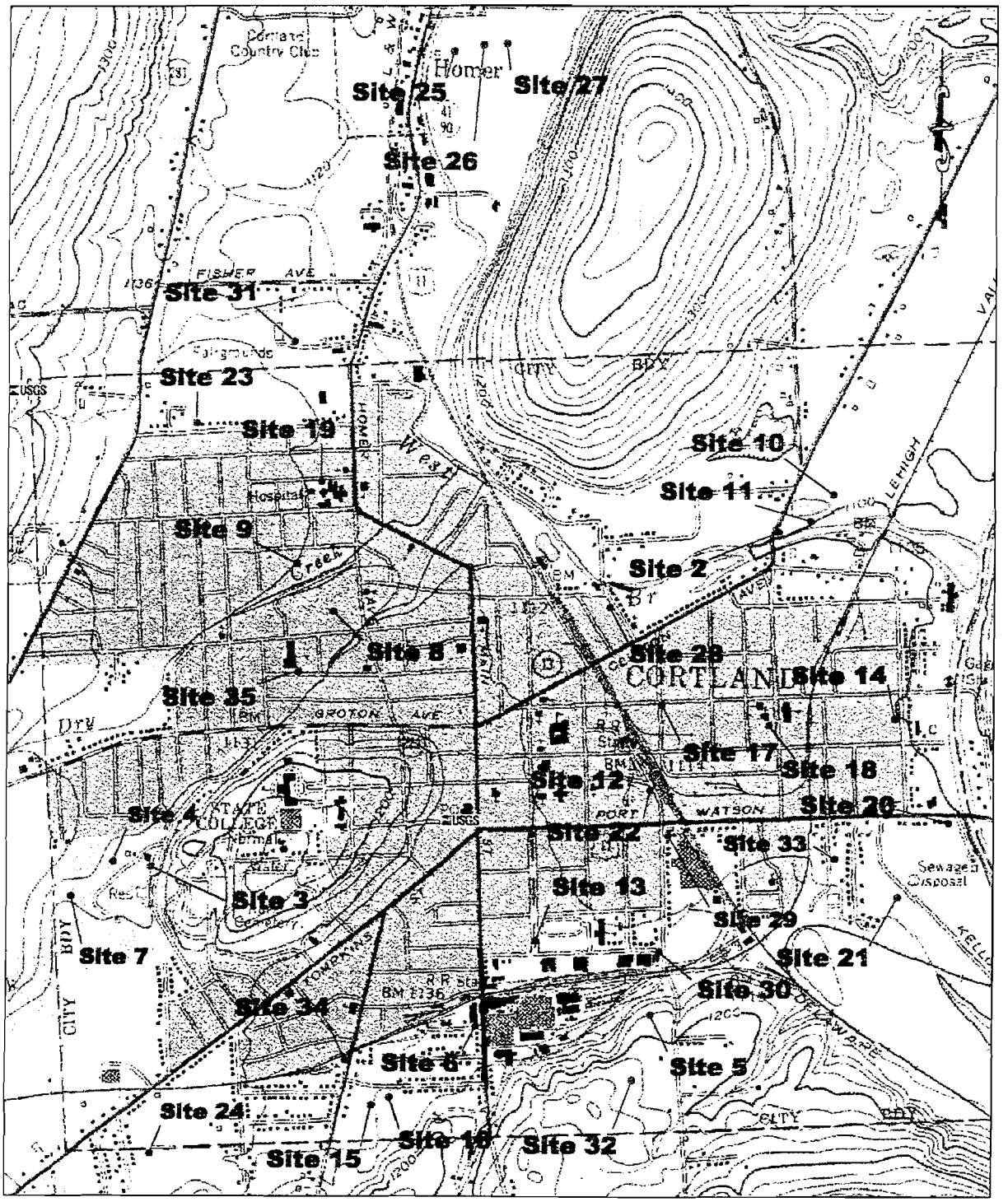
The soils around the city of Cortland contained several PAHs above regulatory limits mentioned earlier in this letter. Benzo(a)pyrene exceeded regulatory limits most often with 31 of 35 sites (89%) having benzo(a)pyrene above regulatory limits. Other PAHs that were frequently above both NYS RCOs and US EPA Residential RBCs include chrysene, benz(a)anthracene, and dibenz(a,h)anthracene. Dibenz(a,h)anthracene exceeded the US EPA Industrial RBC at Sites 21 and 32 and benz(a)anthracene exceeded the US EPA Industrial RBC at Site 21. In addition, standards for both benzo(a)pyrene and dibenz(a,h)anthracene were exceeded at Site 7, which was the only undeveloped site sampled.

A final report will be compiled after all the New York State samples are collected.

Sincerely,

Stephen R. Maxwell

Enclosure



NOTE: Map from USGS, 1955. Not all streets are seen on map. Site 1 is located SE off the map at I–81 Exit 10, See Table 1 for description

0 0.25 0.50
SCALE
Miles

Project: Cortland PAHs	Client: EPRI/NYSEG	

Figure 1
Cortland PAH Sampling Locations

Filename:	Drawn by:	Approved by:	Date:
CORT_LOC.DWG	SRM	DMM	2/26/2001

Table 1: Cortland Surface Soil Sample TOC Results (dry weight)

META Field ID	Number	Designation	Soil	% Solids	TOC (mg/kg)	Description
S-01 (0-1")	Site	2	A	77.2	22,900	I-81 Exit 10 near intersection of Rt 41. Samples
S-01 (1-6")	1		A	80.2	15,300	were collected about 25 ft. from the exit ramp NE of I-81
S-02 (0-1")	Site	2	A	81.6	19,100	I-81 exit 11 near intersection of Rt. 13. Samples were collected
S-02 (1-6")	2		A	81.2	17,000	100 ft. north of I-81 and 50 ft. from Rt. 13
S-03 (0-1")	Site	3	A	74.2	33,600	Cortland Water Works, Broadway St. front lawn. Near animal refuge and
S-03 (1-6")	3		A	80.2	23,100	picnic area east of Plant #1. Samples collected about 50 ft. from Street
S-04 (0-1")	Site	3	A	83.4	15,500	Cortland Water Works outside of Plant #2. Each sample was
S-04 (1-6")	4		A	87.7	8,730	collected in a grassy area at the north and south end of a parking lot.
S-05 (0-1")	Site	2	A	79.0	21,700	Cortland School District Headquarters. Samples collected in a grassy
S-05 (1-6")	5		A	81.7	16,800	area between the bus garage and 1 Valley View Dr.
S-06 (0-1")	Site	3	A	80.8	26,000	Corner of Crawford St. and Main St., Abandoned brick building. Samples
S-06 (1-6")	6		A	84.3	17,400	collected in a grassy area about 3 ft. from Crawford St.
S-07 (0-1")	Site	4	A	78.7	35,100	Cortland Water Works. Samples collected in a heavily wooded area
S-07 (1-6")	7		A	86.9	22,100	near a dirt road and creek bed.
S-08 (0-1")	Site	2	A	69.3	34,300	Suggett Park, west of Homer St. Samples collected on south side of Dry
S-08 (1-6")	8		A	74.5	28,700	Creek in scattered grassy locations.
S-09 (0-1")	Site	2	A	79.4	21,000	Suggett Park, west of Homer St. Samples collected on north side of Dry
S-09 (1-6")	9		A	80.0	17,300	Creek in scattered grassy locations.
S-10 (0-1")	Site	2	A	75.2	26,400	Yemen Park south of Kennedy Pkwy. Samples collected north of pond
S-10 (1-6")	10		A	78.2	14,700	and I-81. Samples are about 200 yd. from I-81.
S-11 (0-1")	Site	2	A	83.0	22,700	Yemen Park south of Kennedy Pkwy. Samples collected south of pond
S-11 (1-6")	11		A	83.1	16,800	and north of I-81 near BBQ grills, about 50 yd.. From I-81.
S-12 (0-1")	Site	1	A	72.9	33,700	Church St. median in front of # 56. Sample collected in a grassy area
S-12 (1-6")	12		A	77.3	28,900	with pine trees about 10 ft. from Church St.
S-13 (0-1")	Site	1	A	72.7	34,800	Church St. median in front of # 90. Sample collected in a grassy area
S-13 (1-6")	13		A	79.2	26,800	with pine trees near Meldrim Field about 10 ft. from Church St.
S-14 (0-1")	Site	2	A	77.0	26,200	Dexter Park, west of River St. Samples collected in front of tennis courts
S-14 (1-6")	14		A	81.0	23,700	in a area of grassy area with large trees. About 50 ft. from River St.
S-15 (0-1")	Site	2	A	72.1	26,500	Beaudry Park south of Scammell St. Samples collected in the west
S-15 (1-6")	15		A	73.0	30,100	end of the park near the playground and pool in grassy areas.

A = Sand and Silt Loam
1 = Residiential
2 = Municipal or Public
3 = Commercial of Industrial
4 = Undeveloped

Table 1: Cortland Surface Soil Sample TOC Results (dry weight)

META Field ID	Number	Designation	Soil	% Solids	TOC (mg/kg)	Description
S-16 (0-1")	Site	1	A	82.2	12,500	Beaudry Park south of Scammell St. Samples collected in the east
S-16 (1-6")	16		A	85.9	10,300	end of the park in an open grassy area with no trees.
S-17 (0-1")	Site	3	A	75.6	25,900	Elm St. in front of an Industrial Property south of the intersection with
S-17 (1-6")	17		A	79.8	25,700	Pendelton St. Samples the right-of-way of Elm St.
S-18 (0-1")	Site	3	A	75.0	31,000	Vacant lot on south side of Pomeroy St. across from Pomeroy School
S-18 (1-6")	18		A	80.2	21,400	Apartments between Elm St. and Central St.
S-19 (0-1")	Site	3	A	80.0	17,800	Cortland Hospital, north end of western parking lot, next to Alvena Ave.
S-19 (1-6")	19		A	81.3	11,800	samples collected in a grassy area in Alvena Ave. right-of-way.
S-20 (0-1")	Site	3	A	70.6	39,400	Cortland Wastewater Treatment Facility, south side of Port Watson St.
S-20 (1-6")	20		A	74.6	24,600	Samples collected in grassy area at the west end of the parking lot
S-21 (0-1")	Site	2	A	76.7	23,300	Belleview Townhouses, Kellogg Rd. just south of the intersection of
S-21 (1-6")	21		A	79.7	17,600	Sunset St. Samples collected in grassy right-of-way
S-22 (0-1')	Site	3	A	74.1	16,200	Pendelton St. just south of E. Court St. Samples collected in
S-22 (1-6")	22		A	75.1	39,400	right-of-way east of brick building across the street from railroad station
S-23 (0-1")	Site	2	A	78.7	19,300	Wheeler St. School near the old armory. Samples collected in grassy
S-23 (1-6")	23		A	77.5	24,800	area in front of school where buses pick-up and drop-off children
S-24 (0-1")	Site	2	A	74.3	31,200	Back fields of Barry Elementary School near Isabel Dr. Samples
S-24 (1-6")	24		A	75.8	24,200	collected near a walkway in a grassy area
S-25 (0-1")	Site	2	A	73.2	33,200	Fields across the street from Booth Bell Atlantic. Samples collected
S-25 (1-6")	25		A	73.7	32,200	at the most eastern end of the fields on the driving range
S-26 (0-1")	Site	2	A	73.4	29,600	Fields across the street from Booth Bell Atlantic. Samples collected
S-26 (1-6")	26		A	77.2	19,800	in the central section of the fields on the driving range
S-27 (0-1")	Site	2	A	77.7	17,400	Fields across the street from Booth Bell Atlantic. Samples collected
S-27 (1-6")	27		A	79.5	15,500	at the most western end of the field on the driving range near I-81
S-28 (0-1")	Site	1	A	73.5	35,000	Apartment complex on west side of Rickard St. south of the river.
S-28 (1-6")	28		A	79.8	26,500	Samples collected in a grassy area near the parking lot and Rickard St.
S-29 (0-1")	Site	3	A	76.7	23,400	Commercial area near the SE corner of Port Watson and Pendleton St.
S-29 (1-6")	29		A	78.9	18,100	Samples collected in right-of-way near Pendleton St.
S-30 (0-1")	Site	3	A	78.5	20,100	Abandoned industrial facility on SE corner of Pendleton and Huntington
S-30 (1-6")	30		A	84.6	13,200	St. Samples collected in a grassy area near a gravel parking lot

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Table 1: Cortland Surface Soil Sample TOC Results (dry weight)

META Field ID	Number	Designation	Soil	% Solids	TOC (mg/kg)	Description
S-31 (0-1")	Site	2	A	71.1	35,000	Cortland County Fairgrounds. Samples collected in a grassy area
S-31 (1-6")	31		A	73.9	35,900	where Fairgrounds Dr. meets Carroll St.
S-32 (0-1")	Site	2	A	85.0	13,500	Cortland High School off Valley View Dr. Samples collected in grassy
S-32 (1-6")	32		A	81.9	16,400	area by the back parking lot near the football field
S-33 (0-1")	Site	3	A	77.2	36,700	Cortland Department of Public Works S. Franklin St. Samples collected
S-33 (1-6")	33		A	77.6	37,900	on east side of street across from the garage
S-34 (0-1")	Site	3	A	79.8	21,100	Semi-circular brick garage at 84 Owego St. Samples collected
S-34 (1-6")	34		A	74.7	30,500	in grassy right-of-way near garage driveway and Owego St.
S-35 (0-1")	Site	2	A	81.2	19,200	Parker school walkway on Maple St. Samples collected
S-35 (1-6")	35		A	82.0	18,700	in a grassy right-of-way on north side of Maple St.
				78	23,889	Ave
				69	8,730	Min
				88	39,400	Max
				4.03	7724.14	Std. Dev.

A = Sand and Silt Loam
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3 = Commercial of Industrial
4 = Undeveloped

* All Samples are a composite of 2 locations except S-08 and S-09 which had 3 locations each

Table 2: Cortland Surface Soil Results

Lab ID **Field ID:**	ER001201-39DF **S-01-Comp (0-1")**	ER001201-40DF **S-01-Comp (1-6")**	ER001201-41DF **S-02-Comp (0-1")**	ER001201-42DF **S-02-Comp (1-6")**	ER001201-43DF **S-03-Comp (0-1")**
GC/MS/SIM:					
Naphthalene	22.4	28.1	25.3	12.9	34
2-Methylnaphthalene	15.3	19.1	18	12.9	22.6
Acenaphthylene	36.3	55.5	16.8	13.4	23.4
Acenaphthene	8.04	10.3	33.8	11.8	38.5
Dibenzofuran	7.44	10.5	22.9	8.97	29.4
Fluorene	11.6	16.4	38.9	17.9	62.1
Phenanthrene	156	255	436	228	578
Anthracene	32	49	107	46.6	160
Fluoranthene	310	535	927	503	923
Pyrene	309	494	747	411	727
Benz(a)anthracene	169	259	452	230	370
Chrysene	228	343	535	294	418
Benzo(b)fluoranthene	266	384	621	345	446
Benzo(k)fluoranthene	222	339	589	334	388
Benzo(a)pyrene	270	404	644	355	442
Indeno(1,2,3-cd)pyrene	170	241	609	333	305
Dibenz(a,h)anthracene	84.4	134	190	101	97
Benzo(g,h,i)perylene	216	308	791	453	335
Total PAHs	**2538.84**	**3894.4**	**6804.5**	**3714.1**	**5393.2**
Reporting Limit:	4.44	4.09	3.68	4.06	4.48
Detection Limit:	2.22	2.05	1.84	2.03	2.24
Nitrobenzene-D5	75%	93%	80%	77%	85%
2-Fluorobiphenyl	73%	83%	73%	72%	75%
p-Terphenyl	80%	92%	83%	84%	87%
Benzo(a)pyrene-d12	89%	84%	73%	70%	71%

B = Analyte detection in the Blank
D = Analyte reported from dilute extract
U = Undetected above the detection limit
E = Estimated value detected above calibration range
RL = Reporting limit
EDL Estimated detection limit is 50% of the RL

All soil results reported on a dry weight basis.
All values are in ug/kg
NYS Recommended Soil Cleanup Objectives Exceedance (Based on 2.4% TOC)
US EPA Residential RBC Exceedance
US EPA Industrial RBC Exceedance

META

Table 2: Cortland Surface Soil Results

Lab ID **Field ID:**	ER001201-44DF **S-03-Comp (1-6")**	ER001201-45DF **S-04-Comp (0-1")**	ER001201-46DF **S-04-Comp (1-6")**	ER001201-47DF **S-05-Comp (0-1")**	ER001201-48DF **S-05-Comp (1-6")**
GC/MS/SIM:					
Naphthalene	33.2	33.5	119	15	12.4
2-Methylnaphthalene	19.1	18.9	29.3	8.42	7.31
Acenaphthylene	13	29.8	33.7	7.5	4.62
Acenaphthene	8.44	21.5	15.6	23.1	16.2
Dibenzofuran	10.3	18.4	16.8	12.8	8.95
Fluorene	13.7	30.7	20.1	22.6	17.4
Phenanthrene	205	349	261	301	271
Anthracene	44.1	81.1	77.5	66.9	47.9
Fluoranthene	452	589	521	687	594
Pyrene	384	488	451	576	474
Benz(a)anthracene	199	313	283	311	259
Chrysene	275	339	318	391	348
Benzo(b)fluoranthene	293	383	361	530	495
Benzo(k)fluoranthene	260	397	343	521	481
Benzo(a)pyrene	292	430	413	567	529
Indeno(1,2,3-cd)pyrene	200	303	276	444	402
Dibenz(a,h)anthracene	63.8	104	105	136	143
Benzo(g,h,i)perylene	210	312	311	504	498
Total PAHs	**2978.54**	**4235.1**	**3949.9**	**5126.32**	**4615.63**
Reporting Limit:	4.43	4.29	3.84	4.2	4.14
Detection Limit:	2.21	2.14	1.92	2.1	2.07
Nitrobenzene-D5	87%	81%	99%	47%	48%
2-Fluorobiphenyl	74%	74%	91%	51%	52%
p-Terphenyl	87%	91%	108%	59%	61%
Benzo(a)pyrene-d12	72%	70%	94%	50%	54%

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All values are in ug/kg
NYS Recommended Soil Cleanup Objectives Exceedance (Based on 2.4% TOC)
US EPA Residential RBC Exceedance
US EPA Industrial RBC Exceedance

Table 2: Cortland Surface Soil Results

Lab ID Field ID:	ER001201-49DF S-06-Comp (0-1")	ER001201-50DF S-06-Comp (1-6")	ER001201-51DF S-07-Comp (0-1")	ER001201-52DF S-07-Comp (1-6")	ER001201-53DF S-08-Comp (0-1")
GC/MS/SIM:					
Naphthalene	30.6	37.1	22.8	29.1	7.07
2-Methylnaphthalene	33.4	47.8	29.7	35.2	4.07 J
Acenaphthylene	7.83	7.22	15.2	16.1	4.34 J
Acenaphthene	10.1	10.4	5.24	6.84	U
Dibenzofuran	14.3	19.1		9.32	U
Fluorene	11.6	11.8	8.85	9.77	U
Phenanthrene	204	209	87.5	122	43.5
Anthracene	36.2	38.3	31	39.8	7.3
Fluoranthene	338	324	192	206	84.8
Pyrene	292	286	175	190	70.8
Benz(a)anthracene	203	211	118	135	39.7
Chrysene	314	311	169	183	52.6
Benzo(b)fluoranthene	404	277	221	231	63.2
Benzo(k)fluoranthene	306	221	173	181	63.7
Benzo(a)pyrene	357	260	264	268	74
Indeno(1,2,3-cd)pyrene	369	254	236	220	67.8
Dibenz(a,h)anthracene	147	97.2	88.7	86.3	23.6 J
Benzo(g,h,i)perylene	488	317	299	265	75.2
Total PAHs	**3558.1**	**2928.46**	**2143.22**	**2232.92**	**681.68**
Reporting Limit:	4.28	3.95	4.35	3.98	4.75
Detection Limit:	2.14	1.97	2.18	1.99	2.37
Nitrobenzene-D5	46%	66%	41%	36%	62%
2-Fluorobiphenyl	50%	79%	49%	53%	55%
p-Terphenyl	60%	98%	52%	58%	68%
Benzo(a)pyrene-d12	56%	92%	72%	82%	62%

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NYS Recommended Soil Cleanup Objectives Exceedance (Based on 2.4% TOC)
US EPA Residential RBC Exceedance
US EPA Industrial RBC Exceedance

Table 2: Cortland Surface Soil Results

Lab ID **Field ID:**	ER001201-54DF **S-08-Comp (1-6")**	ER001204-33DF **S-09-Comp (0-1")**	ER001204-34DF **S-09-Comp (1-6")**	ER001204-35DF **S-10-Comp (0-1")**	ER001204-36DF **S-10-Comp (1-6")**
GC/MS/SIM:					
Naphthalene	5.83	8.29	8.32	7.29	10.2
2-Methylnaphthalene	3.87 J	4.53	4.6	U	4.5
Acenaphthylene	3.3 J	7.36	9.32	8.03	10.1
Acenaphthene	U	2.19	2.85 J	4.07 J	U
Dibenzofuran	U	U	2.21 J	U	U
Fluorene	U	U	3.88 J	4.34	U
Phenanthrene	24.8	56.5	68.9	67.3	39.7
Anthracene	4.09 U	15.3	16.8	16.5	12.1
Fluoranthene	49.7	130	155	143	99.7
Pyrene	43	136	170	134	102
Benz(a)anthracene	27.7	80.7	94.1	73.9	62.1
Chrysene	36.4	104	107	91.7	90.3
Benzo(b)fluoranthene	42.7	72.9	76.2	46.2	51.8
Benzo(k)fluoranthene	44	97.4	98.5	64.9	61
Benzo(a)pyrene	46.1	98.1	104	76.6	75.1
Indeno(1,2,3-cd)pyrene	44.3	49.5	54.2	40.5	42.3
Dibenz(a,h)anthracene	14.4 J	20.1 J	21.3	17.8 J	16.1 J
Benzo(g,h,i)perylene	49.3	52.2	57	44.5	49.6
Total PAHs	**439.49**	**939.96**	**1059.21**	**844.71**	**731.31**
Reporting Limit:	4.21	4.12	4.21	4.32	3.99
Detection Limit:	2.1	2.06	2.11	2.16	2
Nitrobenzene-D5	55%	103%	92%	78%	72%
2-Fluorobiphenyl	54%	91%	87%	91%	90%
p-Terphenyl	60%	121%	117%	116%	121%
Benzo(a)pyrene-d12	60%	83%	80%	97%	103%

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US EPA Residential RBC Exceedance
US EPA Industrial RBC Exceedance

Table 2: Cortland Surface Soil Results

Lab ID **Field ID:**	ER001204-37DF **S-11-Comp (0-1")**	ER001204-38DF **S-11-Comp (1-6")**	ER001204-39DF **S-12-Comp (0-1")**	ER001204-40DF **S-12-Comp (1-6")**	ER001204-41DF **S-13-Comp (0-1")**
GC/MS/SIM:					
Naphthalene	6.74	4.12	76.2	62	69.2
2-Methylnaphthalene	3.8 J	U	65.2	53	62.6
Acenaphthylene	2.68 J	U	45.8	38.5	34.4
Acenaphthene	U	U	20.7	18.6	15.8
Dibenzofuran	U	U	28.1	23	21.9
Fluorene	U	U	34.7	26	20.6
Phenanthrene	30.4	19.5	549	405	337
Anthracene	5.85	2.43 J	116	93	95.8
Fluoranthene	70.8	45.1	1200	878	798
Pyrene	65.6	43.2	971	703	589
Benz(a)anthracene	39.5	27	598	415	348
Chrysene	51.3	34.3	863	627	508
Benzo(b)fluoranthene	38.9	25.8	579	376	413
Benzo(k)fluoranthene	48.8	30.7	575	449	472
Benzo(a)pyrene	48.6	31.6	652	482	496
Indeno(1,2,3-cd)pyrene	25.7	16.5 J	512	401	393
Dibenz(a,h)anthracene	6.2 J	U	165	123	121
Benzo(g,h,i)perylene	29.8	18.8 J	591	459	448
Total PAHs	**474.67**	**299.05**	**7647.1**	**5626.7**	**5243.5**
Reporting Limit:	4.17	4.06	4.56	4.48	4.55
Detection Limit:	2.08	2.03	2.28	2.24	2.27
Nitrobenzene-D5	94%	89%	92%	80%	102%
2-Fluorobiphenyl	85%	89%	108%	88%	102%
p-Terphenyl	113%	124%	124%	122%	107%
Benzo(a)pyrene-d12	77%	84%	101%	92%	115%

B = Analyte detection in the Blank
D = Analyte reported from dilute extract
U = Undetected above the detection limit
E = Estimated value detected above calibration range
RL = Reporting limit
EDL Estimated detection limit is 50% of the RL

All soil results reported on a dry weight basis.
All values are in ug/kg
NYS Recommended Soil Cleanup Objectives Exceedance (Based on 2.4% TOC)
US EPA Residential RBC Exceedance
US EPA Industrial RBC Exceedance

Table 2: Cortland Surface Soil Results

Lab ID **Field ID:**	ER001204-42ReDF **S-13-Comp (1-6")**	ER001204-43DF **S-14-Comp (0-1")**	ER001204-44DF **S-14-Comp (1-6")**	ER001206-01DF **S-15-Comp (0-1")**	ER001206-02ReDF **S-15-Comp (1-6")**
GC/MS/SIM:					
Naphthalene	46	21.4	12.5	23.1	14
2-Methylnaphthalene	40.9	9.69	5.51	13.7	10.2
Acenaphthylene	20.6	18.2	9.57	7.89	7.17
Acenaphthene	8.64	5.02	3.02 J	3.24 J	U
Dibenzofuran	14.2	5.44	2.76 J	5.33	3.54 J
Fluorene	11.9	6.6	3.33 J	U	U
Phenanthrene	216	137	82.4	82.3	53.8
Anthracene	46.2	29.6	17.7	18.1	11
Fluoranthene	427	306	191	184	114
Pyrene	389	265	165	144	100
Benz(a)anthracene	224	124	76.9	76.8	55.2
Chrysene	335	200	125	117	92.6
Benzo(b)fluoranthene	306	165	90.3	90.3	82.3
Benzo(k)fluoranthene	336	202	129	125	88.6
Benzo(a)pyrene	373	209	133	137	108
Indeno(1,2,3-cd)pyrene	296	175	104	106	89.1
Dibenz(a,h)anthracene	91.6	50.4	30.6	39.8	26.4
Benzo(g,h,i)perylene	359	198	116	119	104
Total PAHs	**3537.54**	**2128.52**	**1298.58**	**1290.05**	**960.18**
Reporting Limit:	5.4	4.56	4	4.6	4.68
Detection Limit:	2.7	2.28	2	2.3	2.34
Nitrobenzene-D5	63%	90%	82%	89%	64%
2-Fluorobiphenyl	76%	92%	93%	88%	70%
p-Terphenyl	94%	107%	97%	121%	93%
Benzo(a)pyrene-d12	86%	104%	102%	89%	85%

B = Analyte detection in the Blank
D = Analyte reported from dilute extract
U = Undetected above the detection limit
E = Estimated value detected above calibration range
RL = Reporting limit
EDL Estimated detection limit is 50% of the RL

All soil results reported on a dry weight basis.
All values are in ug/kg
NYS Recommended Soil Cleanup Objectives Exceedance (Based on 2.4% TOC)
US EPA Residential RBC Exceedance
US EPA Industrial RBC Exceedance

Table 2: Cortland Surface Soil Results

Lab ID **Field ID:**	ER001206-03DF **S-16-Comp (0-1")**	ER001206-04DF **S-16-Comp (1-6")**	ER001206-05DF **S-17-Comp (0-1")**	ER001206-06DF **S-17-Comp (1-6")**	ER001206-07DF **S-18-Comp (0-1")**
GC/MS/SIM:					
Naphthalene	5.68	4.12	99.8	111	68.5
2-Methylnaphthalene	U	U	74.9	96.3	47.5
Acenaphthylene	U	U	73.8	66	40.8
Acenaphthene	U	3.29 J	74.8	46.3	19.8
Dibenzofuran	U	U	48.6	39.7	23
Fluorene	U	U	78.4	56.6	27.7
Phenanthrene	13.5	28.8	981	638	483
Anthracene	2.27 J	8.47	279	184	129
Fluoranthene	31.5	48.1	2150	1450	1210
Pyrene	29.4	42.7	1850	1280	1020
Benz(a)anthracene	17.7	21.6	1110	825	514
Chrysene	24	30	1550	1140	780
Benzo(b)fluoranthene	14.2	19.2	1110	933	668
Benzo(k)fluoranthene	28.6	34	1320	935	693
Benzo(a)pyrene	26	32.9	1460	1150	729
Indeno(1,2,3-cd)pyrene	9.98 J	14.9 J	1410	1220	527
Dibenz(a,h)anthracene	U	U	449	397	140
Benzo(g,h,i)perylene	11.4 J	16.3 J	1750	1530	626
Total PAHs	**214.23**	**304.38**	15879.5	**12099.2**	**7743.3**
Reporting Limit:	4.08	3.75	4.55	4.19	4.3
Detection Limit:	2.04	1.88	2.28	2.1	2.15
Nitrobenzene-D5	86%	81%	69%	108%	76%
2-Fluorobiphenyl	87%	93%	95%	114%	89%
p-Terphenyl	112%	128%	119%	138%	97%
Benzo(a)pyrene-d12	79%	89%	115%	135%	93%

B = Analyte detection in the Blank
D = Analyte reported from dilute extract
U = Undetected above the detection limit
E = Estimated value detected above calibration range
RL = Reporting limit
EDL Estimated detection limit is 50% of the RL

All soil results reported on a dry weight basis.
All values are in ug/kg
NYS Recommended Soil Cleanup Objectives Exceedance (Based on 2.4% TOC)
US EPA Residential RBC Exceedance
US EPA Industrial RBC Exceedance

Table 2: Cortland Surface Soil Results

Lab ID **Field ID:**	ER001206-08DF **S-18-Comp (1-6")**	ER001207-01DF **S-19-Comp (0-1")**	ER001207-02DF **S-19-Comp (1-6")**	ER001207-03DF **S-20-Comp (0-1")**	ER001207-04DF **S-20-Comp (1-6")**
GC/MS/SIM:					
Naphthalene	50.4	17.7	36.2	95.6	111
2-Methylnaphthalene	34.4	14.9	31.2	163	191
Acenaphthylene	35.8	22.7	48.8	42	103
Acenaphthene	22.9	24.3	12.2	22.5	47.3
Dibenzofuran	21.1	7.18	12.8	29.2	44
Fluorene	25.4	25.1	23.2	18.1	48.4
Phenanthrene	360	306	238	310	542
Anthracene	90.8	79.9	69.7	107	215
Fluoranthene	892	469	686	653	1090
Pyrene	754	465	578	505	893
Benz(a)anthracene	404	250	329	362	738
Chrysene	605	341	460	480	830
Benzo(b)fluoranthene	534	229	324	355	632
Benzo(k)fluoranthene	518	258	414	396	716
Benzo(a)pyrene	585	296	433	452	910
Indeno(1,2,3-cd)pyrene	445	217	369	458	1090
Dibenz(a,h)anthracene	134	65.2	113	136	336
Benzo(g,h,i)perylene	542	269	421	573	1290
Total PAHs	**6052.6**	**3368.5**	**4603.2**	**5142.1**	**9811.6**
Reporting Limit:	4.03	4.05	5.4	7.76	4.45
Detection Limit:	2.01	2.02	2.7	2.38	2.22
Nitrobenzene-D5	81%	82%	63%	120%	76%
2-Fluorobiphenyl	96%	82%	76%	115%	79%
p-Terphenyl	110%	100%	94%	137%	100%
Benzo(a)pyrene-d12	102%	95%	86%	115%	102%

B = Analyte detection in the Blank
D = Analyte reported from dilute extract
U = Undetected above the detection limit
E = Estimated value detected above calibration range
RL = Reporting limit
EDL Estimated detection limit is 50% of the RL

All soil results reported on a dry weight basis.
All values are in ug/kg
NYS Recommended Soil Cleanup Objectives Exceedance (Based on 2.4% TOC)
US EPA Residential RBC Exceedance
US EPA Industrial RBC Exceedance

Table 2: Cortland Surface Soil Results

Lab ID Field ID:	ER001207-05DF S-21-Comp (0-1")		ER001207-06DF S-21-Comp (1-6")	ER001207-07DF S-22-Comp (0-1")	ER001207-08DF S-22-Comp (1-6")	ER001208-01DF S-23-Comp (0-1")
GC/MS/SIM:						
Naphthalene	71.1		149	44.6	222	45
2-Methylnaphthalene	43.9		74.7	36.8	174	20.9
Acenaphthylene	204		313	37.8	170	113
Acenaphthene	127		310	20.4	117	86.8
Dibenzofuran	71.5		261	21.3	144	40.4
Fluorene	142		603	30.4	120	138
Phenanthrene	2350		6930 D	379	2010	1670
Anthracene	830		1910	105	490	490
Fluoranthene	9460	D	12700 D	590	2710	3270
Pyrene	3850		9720 D	553	2320	2560
Benz(a)anthracene	3040		4640 D	254	1390	1500
Chrysene	3780		5510 D	401	2010	1690
Benzo(b)fluoranthene	3310		4030 D	267	1460	1530
Benzo(k)fluoranthene	1920		4690 D	305	1250	1420
Benzo(a)pyrene	3230		3650	320	1620	1750
Indeno(1,2,3-cd)pyrene	3490		3420	270	1430	1720
Dibenz(a,h)anthracene	1180		1160	78.1	500	467
Benzo(g,h,i)perylene	3950		3640	320	1530	1990
Total PAHs	41130		63686.7	**4021.2**	19566.7	20545.9
Reporting Limit:			3.94	4.4	4.46	4.19
Detection Limit:			1.97	2.2	2.23	2.1
Nitrobenzene-D5			104%	93%	104%	78%
2-Fluorobiphenyl			94%	97%	93%	92%
p-Terphenyl			116%	103%	101%	103%
Benzo(a)pyrene-d12			153%	98%	140%	103%

B = Analyte detection in the Blank
D = Analyte reported from dilute extract
U = Undetected above the detection limit
E = Estimated value detected above calibration range
RL = Reporting limit
EDL Estimated detection limit is 50% of the RL

All soil results reported on a dry weight basis.
All values are in ug/kg
NYS Recommended Soil Cleanup Objectives Exceedance (Based on 2.4% TOC)
US EPA Residential RBC Exceedance
US EPA Industrial RBC Exceedance

Table 2: Cortland Surface Soil Results

Lab ID Field ID:	ER001208-02DF S-23-Comp (1-6")	ER001208-03DF S-24-Comp (0-1")	ER001208-04DF S-24-Comp (1-6")	ER001208-05DF S-25-Comp (0-1")	ER001208-06DF S-25-Comp (1-6")
GC/MS/SIM:					
Naphthalene	61.6	14.5	12.6	41	31.7
2-Methylnaphthalene	37.1	7.28	4.79	17.2	16.8
Acenaphthylene	172	20.1	4.72	45	49.8
Acenaphthene	62.4	7.78	4.49	11.7	12.6
Dibenzofuran	35.4	5.04	4.58	7.87	9.49
Fluorene	72.8	11.7	4.88	20.4	12.7
Phenanthrene	1320	149	82.2	223	249
Anthracene	486	40.2	17.8	73.8	80.5
Fluoranthene	2890	273	181	704	616
Pyrene	2390	247	153	778	710
Benz(a)anthracene	1480	122	54.3	351	359
Chrysene	1810	183	98	418	430
Benzo(b)fluoranthene	1490	108	57	215	227
Benzo(k)fluoranthene	1160	126	71	317	281
Benzo(a)pyrene	1610	144	72.5	362	362
Indeno(1,2,3-cd)pyrene	1460	120	58.2	193	223
Dibenz(a,h)anthracene	489	35.4	23.1	56.8	65.6
Benzo(g,h,i)perylene	1550	133	65.6	241	287
Total PAHs	18611.7	**1750.65**	**967.86**	**4096.3**	**4035.9**
Reporting Limit:	4.19	4.55	4.2	4.49	4.46
Detection Limit:	2.09	2.27	2.1	2.24	2.23
Nitrobenzene-D5	99%	76%	89%	88%	78%
2-Fluorobiphenyl	93%	84%	84%	85%	87%
p-Terphenyl	97%	90%	93%	96%	104%
Benzo(a)pyrene-d12	135%	111%	93%	87%	107%

B = Analyte detection in the Blank
D = Analyte reported from dilute extract
U = Undetected above the detection limit
E = Estimated value detected above calibration range
RL = Reporting limit
EDL Estimated detection limit is 50% of the RL

All soil results reported on a dry weight basis.
All values are in ug/kg
NYS Recommended Soil Cleanup Objectives Exceedance (Based on 2.4% TOC)
US EPA Residential RBC Exceedance
US EPA Industrial RBC Exceedance

Table 2: Cortland Surface Soil Results

Lab ID **Field ID:**	ER001208-07DF **S-26-Comp (0-1")**	ER001208-08DF **S-26-Comp (1-6")**	ER001211-01DF **S-27-Comp (0-1")**	ER001211-02DF **S-27-Comp (1-6")**	ER001211-03DF **S-28-Comp (0-1")**
GC/MS/SIM:					
Naphthalene	83.8	87.8	9.67	8.08	59.5
2-Methylnaphthalene	49.4	51.3	3.92 J	3.46 J	46.7
Acenaphthylene	376	274	17	13.1	60
Acenaphthene	76.6	78.5	2.72 J	2.37 J	34.1
Dibenzofuran	18	28.1	2.08 J	U	25.2
Fluorene	84.1	103	4.5	3.43 J	42.3
Phenanthrene	1130	1150	55	48.8	631
Anthracene	485	433	15.2	14.7	214
Fluoranthene	2690	2210	145	125	1730
Pyrene	3180	2550	150	133	1310
Benz(a)anthracene	2260	1840	78.8	66	746
Chrysene	2350	1950	113	88.7	1100
Benzo(b)fluoranthene	1210	1010	53.1	49.7	740
Benzo(k)fluoranthene	1570	1350	80.9	77.1	814
Benzo(a)pyrene	2130	1760	85.7	46.2	925
Indeno(1,2,3-cd)pyrene	1500	1070	56.5	52.1	1020
Dibenz(a,h)anthracene	444	342	16	14.5	319
Benzo(g,h,i)perylene	1750	1310	67.6	59.5	1340
Total PAHs	21521.9	17688.6	**959.65**	**809.68**	**11176**
Reporting Limit:	4.38	4.01	4.13	4.1	4.51
Detection Limit:	2.19	2	2.07	2.05	2.25
Nitrobenzene-D5	70%	84%	89%	79%	48%
2-Fluorobiphenyl	83%	86%	82%	86%	86%
p-Terphenyl	99%	112%	104%	101%	89%
Benzo(a)pyrene-d12	98%	89%	97%	82%	99%

B = Analyte detection in the Blank
D = Analyte reported from dilute extract
U = Undetected above the detection limit
E = Estimated value detected above calibration range
RL = Reporting limit
EDL Estimated detection limit is 50% of the RL

All soil results reported on a dry weight basis.
All values are in ug/kg
NYS Recommended Soil Cleanup Objectives Exceedance (based on 2.4% TOC)
US EPA Residential RBC Exceedance
US EPA Industrial RBC Exceedance

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Table 2: Cortland Surface Soil Results

Lab ID **Field ID:**	ER001211-04DF **S-28-Comp (1-6")**	ER001211-05DF **S-29-Comp (0-1")**	ER001211-06DF **S-29-Comp (1-6")**	ER001211-07DF **S-30-Comp (0-1")**	ER001211-08DF **S-30-Comp (1-6")**
GC/MS/SIM:					
Naphthalene	118	91.4	17.3	18.2	9.74
2-Methylnaphthalene	81.3	34.6	8.53	15.3	5.91
Acenaphthylene	88	9.18	5.28	6.59	4.33
Acenaphthene	75.2	273	30.6	9.25	3.47 J
Dibenzofuran	72.9	85.4	8.76	7.81	U
Fluorene	79	182	22	10.5	U
Phenanthrene	1540	1750	361	207	74.7
Anthracene	488	595	102	44.4	17.4
Fluoranthene	2740	2670	783	446	212
Pyrene	2080	2000	578	354	165
Benz(a)anthracene	1170	1430	372	189	80.9
Chrysene	1540	1760	508	301	135
Benzo(b)fluoranthene	1040	1120	297	213	79
Benzo(k)fluoranthene	1190	1060	317	200	88.3
Benzo(a)pyrene	1380	1330	345	209	90.9
Indeno(1,2,3-cd)pyrene	1430	1130	298	167	81.3
Dibenz(a,h)anthracene	485	375	94.9	55.7	23.4
Benzo(g,h,i)perylene	1730	1350	378	217	109
Total PAHs	17306.1	17265.18	**4535.81**	**2676.64**	**1186.51**
Reporting Limit:	4.15	4.09	3.9	4.07	3.94
Detection Limit:	2.08	2.05	1.95	2.04	1.97
Nitrobenzene-D5	65%	83%	85%	66%	69%
2-Fluorobiphenyl	98%	81%	79%	81%	80%
p-Terphenyl	105%	96%	112%	107%	100%
Benzo(a)pyrene-d12	110%	91%	99%	91%	101%

B = Analyte detection in the Blank
D = Analyte reported from dilute extract
U = Undetected above the detection limit
E = Estimated value detected above calibration range
RL = Reporting limit
EDL Estimated detection limit is 50% of the RL

All soil results reported on a dry weight basis.
All values are in ug/kg
NYS Recommended Soil Cleanup Objectives Exceedance (Based on 2.4% TOC)
US EPA Residential RBC Exceedance
US EPA Industrial RBC Exceedance

Table 2: Cortland Surface Soil Results

Lab ID **Field ID:**	ER001211-09DF **S-31-Comp (0-1")**	ER001211-10DF **S-31-Comp (1-6")**	ER001211-11DF **S-32-Comp (0-1")**	ER001211-12DF **S-32-Comp (1-6")**	ER001211-13DF **S-33-Comp (0-1")**
GC/MS/SIM:					
Naphthalene	46.1	49	46	67.4	137
2-Methylnaphthalene	19.8	21.3	80.4	27.9	150
Acenaphthylene	50.6	47.9	47.1	150	105
Acenaphthene	10.9	13.1	413	257	53.6
Dibenzofuran	10.3	11.2	212	181	48.4
Fluorene	14.5	15	413	344	55.8
Phenanthrene	195	182	3670	8210	989
Anthracene	62.8	63.5	1200	1650	323
Fluoranthene	449	465	15200 D	22100 D	1980
Pyrene	395	357	11400 D	17900 D	1600
Benz(a)anthracene	251	253	5460 D	9850 D	993
Chrysene	369	370	7670 D	13600 D	1370
Benzo(b)fluoranthene	252	245	6320 D	13700 D	941
Benzo(k)fluoranthene	265	266	6990 D	11000 D	836
Benzo(a)pyrene	304	307	6910 D	12600 D	1080
Indeno(1,2,3-cd)pyrene	300	323	4600 D	8970 D	796
Dibenz(a,h)anthracene	97.4	85.1	2150	3180	271
Benzo(g,h,i)perylene	433	415	5250 D	10000 D	851
Total PAHs	**3527.9**	**3491.3**	78049.5	134084.3	**12592.3**
Reporting Limit:	4.55	4.42	3.68	3.79	4.36
Detection Limit:	2.27	2.21	1.84	1.9	2.18
Nitrobenzene-D5	67%	66%	88%	72%	59%
2-Fluorobiphenyl	82%	77%	84%	85%	78%
p-Terphenyl	103%	105%	102%	107%	76%
Benzo(a)pyrene-d12	108%	103%	127%	140%	128%

B = Analyte detection in the Blank
D = Analyte reported from dilute extract
U = Undetected above the detection limit
E = Estimated value detected above calibration range
RL = Reporting limit
EDL Estimated detection limit is 50% of the RL

All soil results reported on a dry weight basis.
All values are in ug/kg
NYS Recommended Soil Cleanup Objectives Exceedance (Based on 2.4% TOC)
US EPA Residential RBC Exceedance
US EPA Industrial RBC Exceedance

Table 2: Cortland Surface Soil Results

Lab ID **Field ID:**	ER001211-14DF **S-33-Comp (1-6")**	ER001211-15DF **S-34-Comp (0-1")**	ER001211-16DF **S-34-Comp (1-6")**	ER001211-17DF **S-35-Comp (0-1")**	ER001211-18DF **S-35-Comp (1-6")**
GC/MS/SIM:					
Naphthalene	156	75.3	181	25.6	39
2-Methylnaphthalene	177	108	261	11.8	16.7
Acenaphthylene	109	13.8	35.7	44.6	36.9
Acenaphthene	62.9	10.2	18.4	27.7	28.6
Dibenzofuran	60.5	27.3	72.6	14.4	19.1
Fluorene	89.1	12.4	24.1	37.5	41.5
Phenanthrene	1140	214	389	616	548
Anthracene	377	40	74.2	162	136
Fluoranthene	2030	409	645	1400	1210
Pyrene	1660	348	570	1150	965
Benz(a)anthracene	922	184	315	678	585
Chrysene	1240	252	450	888	779
Benzo(b)fluoranthene	893	175	302	599	562
Benzo(k)fluoranthene	868	175	326	571	613
Benzo(a)pyrene	1130	191	348	714	669
Indeno(1,2,3-cd)pyrene	765	132	270	605	486
Dibenz(a,h)anthracene	268	45.9	86.7	201	151
Benzo(g,h,i)perylene	823	158	316	648	556
Total PAHs	**12763.9**	**2556**	**4627.1**	**8410.7**	**7449.4**
Reporting Limit:	3.92	3.94	4.24	3.77	3.76
Detection Limit:	1.96	1.97	2.12	1.88	1.88
Nitrobenzene-D5	56%	70%	63%	63%	67%
2-Fluorobiphenyl	80%	70%	73%	71%	74%
p-Terphenyl	69%	87%	95%	87%	79%
Benzo(a)pyrene-d12	123%	69%	75%	99%	72%

B = Analyte detection in the Blank
D = Analyte reported from dilute extract
U = Undetected above the detection limit
E = Estimated value detected above calibration range
RL = Reporting limit
EDL Estimated detection limit is 50% of the RL

All soil results reported on a dry weight basis.
All values are in ug/kg
NYS Recommended Soil Cleanup Objectives Exceedance (Based on 2.4% TOC)
US EPA Residential RBC Exceedance
US EPA Industrial RBC Exceedance

Table 2: Cortland Surface Soil Results

Field ID: / GC/MS/SIM:	NYS Soil Cleanup Objectives (mg/kg)	US EPA Residential RBC (mg/kg)	US EPA Industrial RBC (mg/kg)	Statistics		
				Mean	Min	Max
Naphthalene	31.2	1600	41000	49.38	4.12	222.00
2-Methylnaphthalene	87.4	1600	41000	43.40	3.46	261.00
Acenaphthylene	98.4	None	None	53.19	2.68	376.00
Acenaphthene	50.0	4700	120000	44.74	2.19	413.00
Dibenzofuran	14.9	310	8200	34.95	2.08	261.00
Fluorene	50.0	3100	82000	58.33	3.33	603.00
Phenanthrene	50.0	None	None	689.12	13.5	8210.00
Anthracene	50.0	23000	610000	193.58	2.27	1910.00
Fluoranthene	50.0	3100	82000	1624.14	31.5	22100.00
Pyrene	50.0	2300	61000	1280.54	29.4	17900.00
Benz(a)anthracene	0.538	0.87	7.8	733.71	17.7	9850.00
Chrysene	0.960	87	780	961.50	24	13600.00
Benzo(b)fluoranthene	2.64	0.87	7.8	787.00	14.2	13700.00
Benzo(k)fluoranthene	2.64	8.7	78	759.29	28.6	11000.00
Benzo(a)pyrene	0.146	0.087	0.78	862.69	26	12600.00
Indeno(1,2,3-cd)pyrene	7.68	0.87	7.8	699.66	9.98	8970.00
Dibenz(a,h)anthracene	0.034	0.087	0.78	251.87	6.2	3180.00
Benzo(g,h,i)perylene	50.0	None	None	808.20	11.4	10000.00
	14.9	None	None	**9908.94**	**214.23**	**134084.30**

* NYS Soil Cleanup Objectives have been adjusted to the average TOC content of the Cortland surface soil samples