



OSPREY ENVIRONMENTAL ENGINEERING, LLC.

146 EAST MAIN STREET . CLINTON, CT 06413

PHONE: 860.669.8651

Mr. Scott Bartlett, Superintendent, Director of Public Works Operations
Fairfield Department of Public Works
725 Old Post Road
Fairfield, CT 06824

03 May 2018

Re: Soils Sampling, Grids G1-K1
Aggregate Recycling Yard Berm Project, Fairfield, CT
Collection date: 01 May 2018

Per your request, samples of soils from the above delineated site grids were collected to determine concentrations of constituents of concern (COCs) related to available environmental and health & safety standards and guidelines. Samples were composited from each grid and were collected in new glassware supplied by the laboratory and stored in compliance with standard sample preservation procedures. The composite samples were submitted to Complete Environmental Testing, Inc., a Connecticut Certified Laboratory. Samples were compared to the DEEP Remediation Standards Regulations (RSRs) Direct Exposure Criteria (DEC) for environmental consideration. Samples were analyzed for PCBs, ETPH, arsenic, and lead. The following is a comparison of the results of the analyses to their respective evaluation criteria.

Sample Summary Table

COMPOUND	ETPH	Arsenic	Lead	PCBs
(Residential/Industrial & Commercial) mg/kg	500/2500	10/10	400/1000	1/10
Grid G1	<i>1800</i>	2.9	48	ND<0.12
Grid H1	<i>1900</i>	2.8	30	ND<0.12
Grid I1	<i>1700</i>	3.5	37	0.44
Grid J1	<i>7500</i>	3.3	16	ND<0.12
Grid K1	<i>2600</i>	4.0	63	ND<0.11

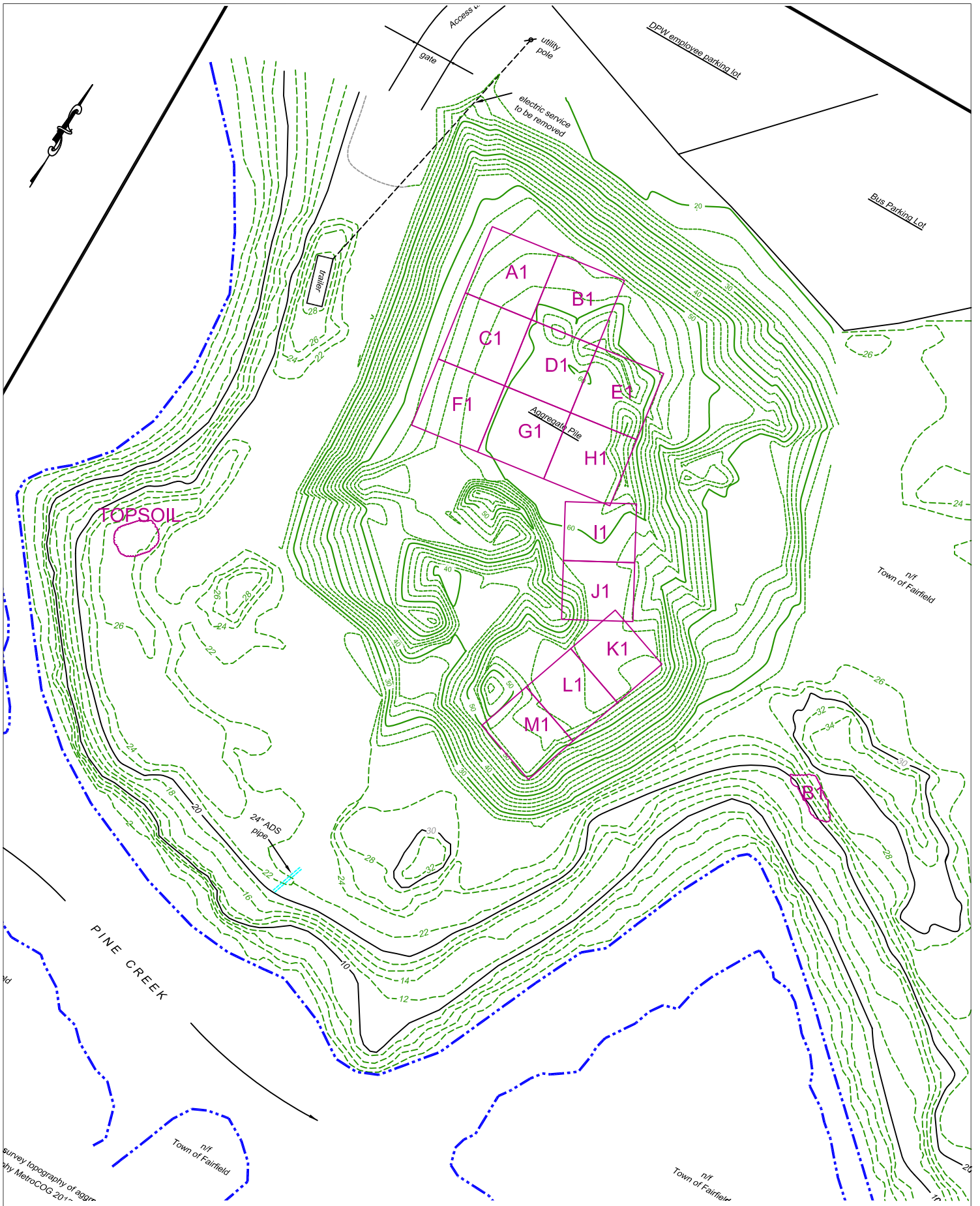
Green is above the Residential DEC *Blue* is above the Residential & Industrial/Commercial DEC

The Grid samples all had ETPH above the Residential DEC most likely due to the presence of asphalt fragments. Some samples had ETPH above the Industrial/Commercial DEC as well, which was expected as they had higher concentrations of asphalt. PCBs, arsenic and lead were all below the Residential and the Industrial/Commercial DEC.

Should you have any questions regarding the above, please contact me.

Sincerely,
Osprey Environmental Engineering, LLC.

Robert Grabarek, P.E., L.S., LEP
President



A-3

AGGREGATE YARD SOIL SAMPLES
DEPARTMENT OF PUBLIC WORKS FACILITY
90 ROD HIGHWAY, FAIRFIELD, CT

OSPREY
ENVIRONMENTAL ENGINEERING, LLC
 146 East Main Street
 Clinton, CT 06413
 Phone (860) 669-8651

DRAWN BY: RJC
SCALE: 1"=100'
DATE: 04.23.18
REVISIONS:

Client: Mr. Robert Grabarek
Osprey Enviromental
146 East Main St
Clinton, CT 06413

Analytical Report

CET# 8050014



Report Date: May 03, 2018
Project: Fairfield

Connecticut Laboratory Certificate: PH 0116
Massachusetts laboratory Certificate: M-CT903



New York NELAP Accreditation: 11982
Rhode Island Certification: 199

CET # : 8050014

Project: Fairfield

SAMPLE SUMMARY

The sample(s) were received at 7.6°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
G1	8050014-01	Soil	5/01/2018 9:30	05/01/2018
H1	8050014-02	Soil	5/01/2018 9:30	05/01/2018
I1	8050014-03	Soil	5/01/2018 9:30	05/01/2018
J1	8050014-04	Soil	5/01/2018 9:30	05/01/2018
K1	8050014-05	Soil	5/01/2018 9:30	05/01/2018

CET #: 8050014

Project: Fairfield

Analyte: Percent Solids [SM 2540 G]

Analyst: DRL

Matrix: Soil

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
8050014-01	G1	81	1.0	%	1	B8E0134	05/01/2018	05/01/2018 16:02	
8050014-02	H1	84	1.0	%	1	B8E0134	05/01/2018	05/01/2018 16:02	
8050014-03	I1	80	1.0	%	1	B8E0134	05/01/2018	05/01/2018 16:02	
8050014-04	J1	83	1.0	%	1	B8E0134	05/01/2018	05/01/2018 16:02	
8050014-05	K1	83	1.0	%	1	B8E0134	05/01/2018	05/01/2018 16:02	

Analyte: Total Lead [EPA 6010C]

Analyst: SS

Prep: EPA 3051A

Matrix: Soil

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
8050014-01	G1	48	2.4	mg/kg dry	1	B8E0208	05/02/2018	05/02/2018 14:43	
8050014-02	H1	30	2.2	mg/kg dry	1	B8E0208	05/02/2018	05/02/2018 14:56	
8050014-03	I1	37	2.4	mg/kg dry	1	B8E0208	05/02/2018	05/02/2018 15:01	
8050014-04	J1	16	2.3	mg/kg dry	1	B8E0208	05/02/2018	05/02/2018 15:05	
8050014-05	K1	63	2.3	mg/kg dry	1	B8E0208	05/02/2018	05/02/2018 15:09	

Analyte: Total Arsenic [EPA 6010C]

Analyst: SS

Prep: EPA 3051A

Matrix: Soil

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
8050014-01	G1	2.9	1.2	mg/kg dry	1	B8E0208	05/02/2018	05/02/2018 14:43	
8050014-02	H1	2.8	1.1	mg/kg dry	1	B8E0208	05/02/2018	05/02/2018 14:56	
8050014-03	I1	3.5	1.2	mg/kg dry	1	B8E0208	05/02/2018	05/02/2018 15:01	
8050014-04	J1	3.3	1.1	mg/kg dry	1	B8E0208	05/02/2018	05/02/2018 15:05	
8050014-05	K1	4.0	1.2	mg/kg dry	1	B8E0208	05/02/2018	05/02/2018 15:09	

CET #: 8050014

Project: Fairfield

Client Sample ID G1

Lab ID: 8050014-01

Conn. Extractable TPH

Method: CT-ETPH

Analyst: MJH

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
ETPH	1800	62	1	EPA 3550C	B8E0148	05/01/2018	05/02/2018 00:23	R
<i>Surrogate: Octacosane</i>	53.5 %	50 - 150			B8E0148	05/01/2018	05/02/2018 00:23	
R C18-C36 unknown								

PCBs by ASE

Method: EPA 8082A

Analyst: MPC

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
PCB-1016	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:16	
PCB-1221	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:16	
PCB-1232	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:16	
PCB-1242	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:16	
PCB-1248	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:16	
PCB-1254	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:16	
PCB-1260	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:16	
PCB-1268	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:16	
PCB-1262	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:16	
<i>Surrogate: TCMX [1C]</i>	92.4 %	30 - 150			B8E0103	05/01/2018	05/01/2018 16:16	
<i>Surrogate: TCMX [2C]</i>	126 %	30 - 150			B8E0103	05/01/2018	05/01/2018 16:16	
<i>Surrogate: DCB [1C]</i>	98.9 %	30 - 150			B8E0103	05/01/2018	05/01/2018 16:16	
<i>Surrogate: DCB [2C]</i>	106 %	30 - 150			B8E0103	05/01/2018	05/01/2018 16:16	

CET #: 8050014

Project: Fairfield

Client Sample ID H1

Lab ID: 8050014-02

Conn. Extractable TPH

Analyst: MJH

Method: CT-ETPH

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
ETPH	1900	59	1	EPA 3550C	B8E0148	05/01/2018	05/02/2018 00:46	R
<i>Surrogate: Octacosane</i>	<i>59.6 %</i>	<i>50 - 150</i>			B8E0148	05/01/2018	<i>05/02/2018 00:46</i>	
R C18-C36 unknown								

PCBs by ASE

Analyst: MPC

Method: EPA 8082A

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
PCB-1016	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:36	
PCB-1221	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:36	
PCB-1232	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:36	
PCB-1242	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:36	
PCB-1248	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:36	
PCB-1254	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:36	
PCB-1260	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:36	
PCB-1268	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:36	
PCB-1262	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:36	
<i>Surrogate: TCMX [1C]</i>	<i>104 %</i>	<i>30 - 150</i>			B8E0103	05/01/2018	<i>05/01/2018 16:36</i>	
<i>Surrogate: TCMX [2C]</i>	<i>139 %</i>	<i>30 - 150</i>			B8E0103	05/01/2018	<i>05/01/2018 16:36</i>	
<i>Surrogate: DCB [1C]</i>	<i>105 %</i>	<i>30 - 150</i>			B8E0103	05/01/2018	<i>05/01/2018 16:36</i>	
<i>Surrogate: DCB [2C]</i>	<i>118 %</i>	<i>30 - 150</i>			B8E0103	05/01/2018	<i>05/01/2018 16:36</i>	

CET #: 8050014

Project: Fairfield

Client Sample ID 11

Lab ID: 8050014-03

Conn. Extractable TPH

Method: CT-ETPH

Analyst: MJH

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
ETPH	1700	62	1	EPA 3550C	B8E0148	05/01/2018	05/02/2018 01:09	R
<i>Surrogate: Octacosane</i>	<i>67.1 %</i>	<i>50 - 150</i>			B8E0148	05/01/2018	<i>05/02/2018 01:09</i>	
R C18-C36 unknown								

PCBs by ASE

Method: EPA 8082A

Analyst: MPC

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
PCB-1016	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:55	
PCB-1221	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:55	
PCB-1232	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:55	
PCB-1242	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:55	
PCB-1248	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:55	
PCB-1254	0.18	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:55	
PCB-1260	0.26	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:55	
PCB-1268	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:55	
PCB-1262	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 16:55	
<i>Surrogate: TCMX [1C]</i>	<i>81.7 %</i>	<i>30 - 150</i>			B8E0103	05/01/2018	<i>05/01/2018 16:55</i>	
<i>Surrogate: TCMX [2C]</i>	<i>107 %</i>	<i>30 - 150</i>			B8E0103	05/01/2018	<i>05/01/2018 16:55</i>	
<i>Surrogate: DCB [1C]</i>	<i>77.9 %</i>	<i>30 - 150</i>			B8E0103	05/01/2018	<i>05/01/2018 16:55</i>	
<i>Surrogate: DCB [2C]</i>	<i>97.4 %</i>	<i>30 - 150</i>			B8E0103	05/01/2018	<i>05/01/2018 16:55</i>	

CET #: 8050014

Project: Fairfield

Client Sample ID J1

Lab ID: 8050014-04

Conn. Extractable TPH

Analyst: MJH

Method: CT-ETPH

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
ETPH	7500	60	1	EPA 3550C	B8E0148	05/01/2018	05/02/2018 01:32	R
<i>Surrogate: Octacosane</i>	75.1 %	50 - 150			B8E0148	05/01/2018	05/02/2018 01:32	
R C18-C36 unknown								

PCBs by ASE

Analyst: MPC

Method: EPA 8082A

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
PCB-1016	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:14	
PCB-1221	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:14	
PCB-1232	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:14	
PCB-1242	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:14	
PCB-1248	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:14	
PCB-1254	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:14	
PCB-1260	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:14	
PCB-1268	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:14	
PCB-1262	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:14	
<i>Surrogate: TCMX [1C]</i>	105 %	30 - 150			B8E0103	05/01/2018	05/01/2018 17:14	
<i>Surrogate: TCMX [2C]</i>	138 %	30 - 150			B8E0103	05/01/2018	05/01/2018 17:14	
<i>Surrogate: DCB [1C]</i>	98.4 %	30 - 150			B8E0103	05/01/2018	05/01/2018 17:14	
<i>Surrogate: DCB [2C]</i>	97.9 %	30 - 150			B8E0103	05/01/2018	05/01/2018 17:14	

CET #: 8050014

Project: Fairfield

Client Sample ID K1

Lab ID: 8050014-05

Conn. Extractable TPH

Method: CT-ETPH

Analyst: MJH

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
ETPH	2600	60	1	EPA 3550C	B8E0148	05/01/2018	05/02/2018 01:55	R
<i>Surrogate: Octacosane</i>	<i>82.1 %</i>	<i>50 - 150</i>			B8E0148	05/01/2018	<i>05/02/2018 01:55</i>	
R C18-C36 unknown								

PCBs by ASE

Method: EPA 8082A

Analyst: MPC

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
PCB-1016	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:32	
PCB-1221	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:32	
PCB-1232	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:32	
PCB-1242	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:32	
PCB-1248	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:32	
PCB-1254	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:32	
PCB-1260	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:32	
PCB-1268	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:32	
PCB-1262	ND	0.12	1	EPA 3545A	B8E0103	05/01/2018	05/01/2018 17:32	
<i>Surrogate: TCMX [1C]</i>	<i>77.3 %</i>	<i>30 - 150</i>			B8E0103	05/01/2018	<i>05/01/2018 17:32</i>	
<i>Surrogate: TCMX [2C]</i>	<i>101 %</i>	<i>30 - 150</i>			B8E0103	05/01/2018	<i>05/01/2018 17:32</i>	
<i>Surrogate: DCB [1C]</i>	<i>75.0 %</i>	<i>30 - 150</i>			B8E0103	05/01/2018	<i>05/01/2018 17:32</i>	
<i>Surrogate: DCB [2C]</i>	<i>82.2 %</i>	<i>30 - 150</i>			B8E0103	05/01/2018	<i>05/01/2018 17:32</i>	

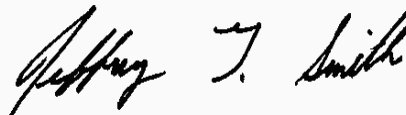
All questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

This technical report was reviewed by Jeffrey Smith



David Ditta
Laboratory Director



Project Manager

Report Comments:

Sample Result Flags:

- E- The result is estimated, above the calibration range.
- H- The surrogate recovery is above the control limits.
- L- The surrogate recovery is below the control limits.
- B- The compound was detected in the laboratory blank.
- P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
- D- The RPD between the sample and the sample duplicate is high. Sample Homogeneity may be a problem.
- + - The Surrogate was diluted out.
- *C1- The Continuing Calibration did not meet method specifications and was biased low for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased low.
- *C2- The Continuing Calibration did not meet method specifications and was biased high for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased high.
- *F1- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the low side.
- *F2- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the high side.
- I- The Analyte exceeds %RSD limits for the Initial Calibration. This is a non-directional bias.

All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

For Percent Solids, if any of the following prep methods (3050B, 3540C, 3545A, 3550C, 5035 and 9013A) were used for samples pertaining to this report, the percent solids procedure is within that prep method.

Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

ND is None Detected at or above the specified reporting limit

RL is the Reporting Limit.

All analyses were performed in house unless a Reference Laboratory is listed.

Samples will be disposed of 30 days after the report date.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>CT-ETPH in Soil</i>	
ETPH	CT
<i>EPA 6010C in Soil</i>	
Lead	CT,NY
Arsenic	CT,NY
<i>EPA 8082A in Soil</i>	
PCB-1016	CT,NY
PCB-1221	CT,NY
PCB-1232	CT,NY
PCB-1242	CT,NY
PCB-1248	CT,NY
PCB-1254	CT,NY
PCB-1260	CT,NY
PCB-1268	CT,NY
PCB-1262	NY
<i>SM 2540 G in Soil</i>	
Percent Solids	CT

Complete Environmental Testing operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Public Health	PH0116	09/30/2018
NY	New York Certification (NELAC)	11982	04/01/2019

