



Friday, May 10, 2019

Attn: Mr. Nick Granata
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Project ID: 98 PROSPECT E-0700
SDG ID: GCD06778
Sample ID#s: CD06778

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis Shiller". The signature is written in a cursive style.

Phyllis/Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

May 10, 2019

SDG I.D.: GCD06778

Project ID: 98 PROSPECT E-0700

Client Id	Lab Id	Matrix
DRUM-1	CD06778	SOLID



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
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Analysis Report

May 10, 2019

FOR: Attn: Mr. Nick Granata
 Tighe & Bond
 213 Court St, Suite 1100
 Middletown, CT 06457

Sample Information

Matrix: SOLID
 Location Code: TIGHE-DAS
 Rush Request: Standard
 P.O.#: E-0700-006

Custody Information

Collected by:
 Received by: LB
 Analyzed by: see "By" below

Date

05/02/19
 05/03/19

Time

15:30
 14:00

Laboratory Data

SDG ID: GCD06778
 Phoenix ID: CD06778

Project ID: 98 PROSPECT E-0700
 Client ID: DRUM-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.74	0.74	mg/Kg	1	05/04/19	CPP	SW6010D
Arsenic	< 1.5	1.5	mg/Kg	1	05/04/19	CPP	SW6010D
Barium	3.11	0.74	mg/Kg	1	05/04/19	CPP	SW6010D
Beryllium	< 0.59	0.59	mg/Kg	1	05/04/19	CPP	SW6010D
Cadmium	< 0.74	0.74	mg/Kg	1	05/04/19	CPP	SW6010D
Chromium	31.0	0.74	mg/Kg	1	05/04/19	CPP	SW6010D
Copper	< 1.5	1.5	mg/kg	1	05/04/19	CPP	SW6010D
Mercury	< 0.03	0.03	mg/Kg	1	05/06/19	RS	SW7471B
Nickel	135	0.74	mg/Kg	1	05/04/19	CPP	SW6010D
Lead	1.57	0.74	mg/Kg	1	05/04/19	CPP	SW6010D
Antimony	< 7.4	7.4	mg/Kg	1	05/04/19	CPP	SW6010D
Selenium	< 2.9	2.9	mg/Kg	1	05/04/19	CPP	SW6010D
Thallium	< 6.6	6.6	mg/Kg	1	05/04/19	CPP	SW6010D
Vanadium	49.8	0.74	mg/Kg	1	05/04/19	CPP	SW6010D
Zinc	5.5	1.5	mg/Kg	1	05/04/19	CPP	SW6010D
Soil Extraction for PCB	Completed				05/03/19	MM/V	SW3545A
Soil Extraction SVOA PAH	Completed				05/06/19	SJ/LV	SW3545A
Extraction of CT ETPH	Completed				05/06/19	BG/EE	SW3545A
Mercury Digestion	Completed				05/06/19	W/W	SW7471B
Total Metals Digest	Completed				05/03/19	B/AG	SW3050B

TPH by GC (Extractable Products)

Ext. Petroleum H.C. (C9-C36)	25000	11000	mg/Kg	50	05/09/19	KCA	CTETPH 8015D
Identification	**		mg/Kg	50	05/09/19	KCA	CTETPH 8015D

QA/QC Surrogates

% n-Pentacosane	Diluted Out		%	50	05/09/19	KCA	50 - 150 %
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Client ID: DRUM-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Polychlorinated Biphenyls

PCB-1016	ND	780	ug/Kg	5	05/07/19	AW	SW8082A
PCB-1221	ND	780	ug/Kg	5	05/07/19	AW	SW8082A
PCB-1232	ND	780	ug/Kg	5	05/07/19	AW	SW8082A
PCB-1242	ND	780	ug/Kg	5	05/07/19	AW	SW8082A
PCB-1248	ND	780	ug/Kg	5	05/07/19	AW	SW8082A
PCB-1254	ND	780	ug/Kg	5	05/07/19	AW	SW8082A
PCB-1260	ND	780	ug/Kg	5	05/07/19	AW	SW8082A
PCB-1262	ND	780	ug/Kg	5	05/07/19	AW	SW8082A
PCB-1268	ND	780	ug/Kg	5	05/07/19	AW	SW8082A

QA/QC Surrogates

% DCBP	99		%	5	05/07/19	AW	30 - 150 %
% DCBP (Confirmation)	102		%	5	05/07/19	AW	30 - 150 %
% TCMX	72		%	5	05/07/19	AW	30 - 150 %
% TCMX (Confirmation)	78		%	5	05/07/19	AW	30 - 150 %

Polynuclear Aromatic HC

2-Methylnaphthalene	1400000	110000	ug/Kg	100	05/08/19	WB	SW8270D
Acenaphthene	ND	8400	ug/Kg	10	05/08/19	WB	SW8270D
Acenaphthylene	ND	8400	ug/Kg	10	05/08/19	WB	SW8270D
Anthracene	ND	11000	ug/Kg	10	05/08/19	WB	SW8270D
Benz(a)anthracene	ND	3000	ug/Kg	10	05/08/19	WB	SW8270D
Benzo(a)pyrene	ND	3000	ug/Kg	10	05/08/19	WB	SW8270D
Benzo(b)fluoranthene	ND	3000	ug/Kg	10	05/08/19	WB	SW8270D
Benzo(ghi)perylene	ND	3000	ug/Kg	10	05/08/19	WB	SW8270D
Benzo(k)fluoranthene	ND	3000	ug/Kg	10	05/08/19	WB	SW8270D
Chrysene	ND	3000	ug/Kg	10	05/08/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	3000	ug/Kg	10	05/08/19	WB	SW8270D
Fluoranthene	ND	5600	ug/Kg	10	05/08/19	WB	SW8270D
Fluorene	31000	11000	ug/Kg	10	05/08/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	3000	ug/Kg	10	05/08/19	WB	SW8270D
Naphthalene	530000	110000	ug/Kg	100	05/08/19	WB	SW8270D
Phenanthrene	4500	4000	ug/Kg	10	05/08/19	WB	SW8270D
Pyrene	ND	4000	ug/Kg	10	05/08/19	WB	SW8270D

QA/QC Surrogates

% 2-Fluorobiphenyl (10x)	Diluted Out		%	10	05/08/19	WB	30 - 130 %
% Nitrobenzene-d5 (10x)	Diluted Out		%	10	05/08/19	WB	30 - 130 %
% Terphenyl-d14 (10x)	Diluted Out		%	10	05/08/19	WB	30 - 130 %
% 2-Fluorobiphenyl (100x)	Diluted Out		%	100	05/08/19	WB	30 - 130 %
% Nitrobenzene-d5 (100x)	Diluted Out		%	100	05/08/19	WB	30 - 130 %
% Terphenyl-d14 (100x)	Diluted Out		%	100	05/08/19	WB	30 - 130 %

Client ID: DRUM-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

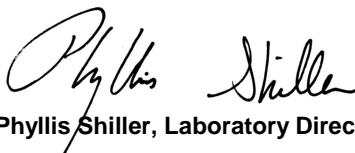
Results are reported on an ``as received`` basis, and are not corrected for dry weight.

TPH Comment:

**Petroleum hydrocarbon chromatogram was not a perfect match with any of the standards, but contains a distribution in the C9 to C16 range. The sample was quantitated against a C9-C36 standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

**Phyllis Shiller, Laboratory Director****May 10, 2019****Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



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 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
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QA/QC Report

May 10, 2019

QA/QC Data

SDG I.D.: GCD06778

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 477659 (mg/kg), QC Sample No: CD06730 (CD06778)													
Mercury - Soil	BRL	0.03	0.14	0.11	NC	105	106	0.9	110	91.2	18.7	70 - 130	30
Comment: Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 70-130%. MS acceptance range is 75-125%.													
QA/QC Batch 477535 (mg/kg), QC Sample No: CD06730 (CD06778)													
<u>ICP Metals - Soil</u>													
Antimony	BRL	3.3	<3.7	<3.8	NC	99.0			90.9			75 - 125	30
Arsenic	BRL	0.67	5.48	7.86	35.7	97.4			88.2			75 - 125	30
Barium	BRL	0.33	46.3	53.8	15.0	102			102			75 - 125	30
Beryllium	BRL	0.27	0.35	0.46	NC	104			96.7			75 - 125	30
Cadmium	BRL	0.33	0.43	0.60	NC	101			93.5			75 - 125	30
Chromium	BRL	0.33	8.96	9.01	0.60	104			99.8			75 - 125	30
Copper	BRL	0.67	21.6	26.6	20.7	88.6			105			75 - 125	30
Lead	BRL	0.33	55.3	62.5	12.2	87.6			93.4			75 - 125	30
Nickel	BRL	0.33	10.1	11.1	9.40	106			95.1			75 - 125	30
Selenium	BRL	1.3	<1.5	<1.5	NC	85.7			78.3			75 - 125	30
Silver	BRL	0.33	<0.37	<0.38	NC	97.6			96.9			75 - 125	30
Thallium	BRL	3.0	<3.3	<3.4	NC	102			92.3			75 - 125	30
Vanadium	BRL	0.33	19.5	20.4	4.50	90.9			99.6			75 - 125	30
Zinc	BRL	0.67	49.1	53.1	7.80	100			93.0			75 - 125	30

r = This parameter is outside laboratory RPD specified recovery limits.



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QA/QC Report

May 10, 2019

QA/QC Data

SDG I.D.: GCD06778

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 477762 (mg/Kg), QC Sample No: CD07352 (CD06778)										
TPH by GC (Extractable Products) - Solid										
Ext. Petroleum H.C. (C9-C36)	ND	50	75	98	26.6	102	109	6.6	60 - 120	30
% n-Pentacosane	62	%	67	86	24.8	94	97	3.1	50 - 150	30
Comment:										
Additional surrogate criteria: LCS acceptance range is 60-120% MS acceptance range 50-150%. The ETPH/DRO LCS has been normalized based on the alkane calibration.										
QA/QC Batch 477546 (ug/Kg), QC Sample No: CD06732 2X (CD06778)										
Polychlorinated Biphenyls - Solid										
PCB-1016	ND	33	70	67	4.4	51	68	28.6	40 - 140	30
PCB-1221	ND	33							40 - 140	30
PCB-1232	ND	33							40 - 140	30
PCB-1242	ND	33							40 - 140	30
PCB-1248	ND	33							40 - 140	30
PCB-1254	ND	33							40 - 140	30
PCB-1260	ND	33	92	95	3.2	63	81	25.0	40 - 140	30
PCB-1262	ND	33							40 - 140	30
PCB-1268	ND	33							40 - 140	30
% DCBP (Surrogate Rec)	92	%	99	111	11.4	68	86	23.4	30 - 150	30
% DCBP (Surrogate Rec) (Confirm	83	%	89	92	3.3	57	78	31.1	30 - 150	30
% TCMX (Surrogate Rec)	77	%	85	85	0.0	58	79	30.7	30 - 150	30
% TCMX (Surrogate Rec) (Confirm	76	%	88	88	0.0	60	81	29.8	30 - 150	30
QA/QC Batch 477727 (ug/kg), QC Sample No: CD06731 (CD06778)										
Polynuclear Aromatic HC - Solid										
2-Methylnaphthalene	ND	230	65	59	9.7	65	59	9.7	30 - 130	30
Acenaphthene	ND	230	69	65	6.0	66	66	0.0	30 - 130	30
Acenaphthylene	ND	230	70	65	7.4	68	66	3.0	30 - 130	30
Anthracene	ND	230	73	68	7.1	71	69	2.9	30 - 130	30
Benz(a)anthracene	ND	230	75	71	5.5	74	70	5.6	30 - 130	30
Benzo(a)pyrene	ND	230	75	71	5.5	73	71	2.8	30 - 130	30
Benzo(b)fluoranthene	ND	230	79	74	6.5	76	74	2.7	30 - 130	30
Benzo(ghi)perylene	ND	230	75	71	5.5	72	70	2.8	30 - 130	30
Benzo(k)fluoranthene	ND	230	76	69	9.7	73	71	2.8	30 - 130	30
Chrysene	ND	230	72	68	5.7	70	67	4.4	30 - 130	30
Dibenz(a,h)anthracene	ND	230	85	81	4.8	82	79	3.7	30 - 130	30
Fluoranthene	ND	230	76	70	8.2	74	72	2.7	30 - 130	30
Fluorene	ND	230	75	70	6.9	73	72	1.4	30 - 130	30
Indeno(1,2,3-cd)pyrene	ND	230	91	85	6.8	86	83	3.6	30 - 130	30
Naphthalene	ND	230	62	56	10.2	63	57	10.0	30 - 130	30
Phenanthrene	ND	230	71	64	10.4	68	66	3.0	30 - 130	30
Pyrene	ND	230	77	71	8.1	76	74	2.7	30 - 130	30
% 2-Fluorobiphenyl	63	%	66	63	4.7	66	63	4.7	30 - 130	30

QA/QC Data

SDG I.D.: GCD06778

Parameter	Blk		LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
	Blank	RL								
% Nitrobenzene-d5	55	%	60	55	8.7	63	56	11.8	30 - 130	30
% Terphenyl-d14	72	%	75	70	6.9	72	72	0.0	30 - 130	30

Comment:

Additional 8270 criteria: 20% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MS Dup - Matrix Spike Duplicate

NC - No Criteria

Intf - Interference



Phyllis Shiller, Laboratory Director
May 10, 2019

Friday, May 10, 2019

Criteria: CT: GAM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCD06778 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL	Criteria	Analysis Units
CD06778	\$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC I/C (mg/kg) / APS Organics	ND	3000	1000	1000	1000	ug/Kg
CD06778	\$8100SMR	2-Methylnaphthalene	CT / RSR DEC I/C (mg/kg) / APS Organics	1400000	110000	1000000	1000000	1000000	ug/Kg
CD06778	\$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	ND	3000	1000	1000	1000	ug/Kg
CD06778	\$8100SMR	2-Methylnaphthalene	CT / RSR DEC RES (mg/kg) / APS Organics	1400000	110000	270000	270000	270000	ug/Kg
CD06778	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	ND	3000	1000	1000	1000	ug/Kg
CD06778	\$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC RES (mg/kg) / APS Organics	ND	3000	1000	1000	1000	ug/Kg
CD06778	\$8100SMR	Benzo(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	ND	3000	1000	1000	1000	ug/Kg
CD06778	\$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	ND	3000	1000	1000	1000	ug/Kg
CD06778	\$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	ND	3000	1000	1000	1000	ug/Kg
CD06778	\$8100SMR	2-Methylnaphthalene	CT / RSR GA,GAA (mg/kg) / APS Organics	1400000	110000	560	560	560	ug/Kg
CD06778	\$8100SMR	Benzo(ghi)perylene	CT / RSR GA,GAA (mg/kg) / APS Organics	ND	3000	1000	1000	1000	ug/Kg
CD06778	\$8100SMR	Chrysene	CT / RSR GA,GAA (mg/kg) / APS Organics	ND	3000	1000	1000	1000	ug/Kg
CD06778	\$8100SMR	Dibenz(a,h)anthracene	CT / RSR GA,GAA (mg/kg) / APS Organics	ND	3000	1000	1000	1000	ug/Kg
CD06778	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GA,GAA (mg/kg) / APS Organics	ND	3000	1000	1000	1000	ug/Kg
CD06778	\$8100SMR	Fluorene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	31000	11000	5600	5600	5600	ug/Kg
CD06778	\$8100SMR	Benzo(b)fluoranthene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	ND	3000	1000	1000	1000	ug/Kg
CD06778	\$8100SMR	Benzo(a)pyrene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	ND	3000	1000	1000	1000	ug/Kg
CD06778	\$8100SMR	Naphthalene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	530000	110000	5600	5600	5600	ug/Kg
CD06778	\$8100SMR	Phenanthrene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	4500	4000	4000	4000	4000	ug/Kg
CD06778	\$8100SMR	Benzo(a)anthracene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	ND	3000	1000	1000	1000	ug/Kg
CD06778	\$8100SMR	Benzo(k)fluoranthene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	ND	3000	1000	1000	1000	ug/Kg
CD06778	\$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR DEC I/C (mg/kg) / Pest/PCB/TPH	25000	11000	2500	2500	2500	mg/Kg
CD06778	\$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR DEC RES (mg/kg) / Pest/PCB/TPH	25000	11000	500	500	500	mg/Kg
CD06778	\$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR GA,GAA (mg/kg) / Pesticides/TPH	25000	11000	500	500	500	mg/Kg
CD06778	TL-SM	Thallium	CT / RSR DEC RES (mg/kg) / Inorganics	BRL	6.6	5.4	5.4	5.4	mg/Kg

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedances. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedance information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name: Phoenix Environmental Labs, Inc.

Client: Tighe & Bond

Project Location: 98 PROSPECT E-0700

Project Number:

Laboratory Sample ID(s): CD06778

Sampling Date(s): 5/2/2019

List RCP Methods Used (e.g., 8260, 8270, et cetera) 6010, 7470/7471, 8082, 8270, ETPH

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1A	Were the method specified preservation and holding time requirements met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1B	<u><i>YPH and EPH methods only:</i></u> Was the VPH or EPH method conducted without significant modifications (see section 11.3 of respective RCP methods)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
2	Were all samples received by the laboratory in a condition consistent with that described on the associated Chain-of-Custody document(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3	Were samples received at an appropriate temperature (< 6 Degrees C)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
4	Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? See Section: ICP Narration.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5	a) Were reporting limits specified or referenced on the chain-of-custody? b) Were these reporting limits met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
7	Are project-specific matrix spikes and laboratory duplicates included in the data set?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or 1B is "No", the data package does not meet the requirements for "Reasonable Confidence". This form may not be altered and all questions must be answered.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature:  **Position:** Assistant Lab Director

Printed Name: Greg Lawrence **Date:** Friday, May 10, 2019

Name of Laboratory Phoenix Environmental Labs, Inc.

This certification form is to be used for RCP methods only.



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



RCP Certification Report

May 10, 2019

SDG I.D.: GCD06778

SDG Comments

8270 Semi-volatile Organics:

The client requested a short list for 8270 RCP Semivolatile. Only the PAH constituents are reported as requested on the chain-of-custody.

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

ETPH Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

Instrument:

AU-FID1 05/09/19-1

Keith Aloisa, Chemist 05/09/19

CD06778

The initial calibration (ETPH426I) RSD for the compound list was less than 30% except for the following compounds: None. As per section 7.2.3, a discrimination check standard was run (509A003_1) and contained the following outliers: None.

The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 477762 (CD07352)

CD06778

All LCS recoveries were within 60 - 120 with the following exceptions: None.

All LCSD recoveries were within 60 - 120 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

Additional surrogate criteria: LCS acceptance range is 60-120% MS acceptance range 50-150%. The ETPH/DRO LCS has been normalized based on the alkane calibration.

Mercury Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

MERLIN 05/06/19 08:56

Rick Schweitzer, Chemist 05/06/19

CD06778

The method preparation blank contains all of the acids and reagents as the samples; the instrument blanks do not.

The initial calibration met all criteria including a standard run at or below the reporting level.

All calibration verification standards (ICV, CCV) met criteria.

All calibration blank verification standards (ICB, CCB) met criteria.

The matrix spike sample is used to identify spectral interference for each batch of samples, if within 85-115%, no interference is observed and no further action is taken.

The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 477659 (CD06730)

CD06778

All LCS recoveries were within 70 - 130 with the following exceptions: None.



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Certification Report

May 10, 2019

SDG I.D.: GCD06778

Mercury Narration

All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 70-130%. MS acceptance range is 75-125%.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? No.

QC Batch 477535 (Samples: CD06778): -----

The Sample/Duplicate RPD exceeds the method criteria for one or more analytes, therefore there may be variability in the reported result. (Arsenic)

Instrument:

ARCOS 05/04/19 08:02 Cindy Pearce, Chemist 05/04/19

CD06778

Additional criteria for CCV and ICSAB:

Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB). The linear range is defined daily by the calibration range.

The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.

The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 477535 (CD06730)

CD06778

All LCS recoveries were within 75 - 125 with the following exceptions: None.

PCB Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

Instrument:

AU-ECD3 05/06/19-1 Adam Werner, Chemist 05/06/19

CD06778

The initial calibration (PC423AI) RSD for the compound list was less than 20% except for the following compounds: None.

The initial calibration (PC423BI) RSD for the compound list was less than 20% except for the following compounds: None.

The continuing calibration %D for the compound list was less than 15% except for the following compounds: None.

QC (Batch Specific):

Batch 477546 (CD06732)

CD06778

All LCS recoveries were within 40 - 140 with the following exceptions: None.

All LCSD recoveries were within 40 - 140 with the following exceptions: None.



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RCP Certification Report

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SDG I.D.: GCD06778

PCB Narration

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

SVOA Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

Instrument:

CHEM04 05/08/19-1

Wes Bryon, Chemist 05/08/19

CD06778

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM04/4_BN_0419):

100% of target compounds met criteria.

The following compounds had %RSDs >20%: None.

The following compounds did not meet recommended response factors: None.

The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM04/0508_05-4_BN_0419):

Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

100% of target compounds met criteria.

The following compounds did not meet % deviation criteria: None.

The following compounds did not meet maximum % deviations: None.

The following compounds did not meet recommended response factors: None.

The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 477727 (CD06731)

CD06778

All LCS recoveries were within 30 - 130 with the following exceptions: None.

All LCSD recoveries were within 30 - 130 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

Additional 8270 criteria: 20% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

Temperature Narration

The samples were received at 2.2C with cooling initiated.

(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler: Yes No
 Coolant: IPK ICE
 Temp: QC Pg 1 of 1

Data Delivery/Contact Options:
 Fax:
 Phone:
 Email: NAGranata@TigheBond.com

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
 Email: info@phoenixlabs.com Fax (860) 645-0823
 Client Services (860) 645-8726

CHAIN OF CUSTODY RECORD

Project: 98 Prospect E-0700
 Report to: Nick Granata
 Invoice to: Tighe & Bond
 QUOTE # DAS Pricing

Customer: Tighe & Bond
 Address: 213 Court Street
 Middletown, CT 06457

Sampler's Signature: [Signature] Date: 5/23/19
 Client Sample - Information - Identification

Matrix Code: DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
 RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil
 B=Bulk L=Liquid

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled
060778	Drum-1	SD	5/2/2019	15:30

Analysis Request	EPH	YCS	PMH	RSR Metals	PCSS	GL Amber 8 oz w/3004	GL Soil Container () H2O	GL Soil Container () 8 oz	GL Amber 100ml Vial () HCl	PL As ts () 250ml () 150ml () 100ml	PL H2SO4 () 250ml () 150ml () 100ml	PL HNO3 250ml	PL NaOH 250ml	25 Gram EnCore	Bacteria Bottle as is
	X		X	X	X										

Relinquished by:	Accepted by:	Date:	Time:	RI	CT	MA	Data Format	
<u>[Signature]</u>	<u>[Signature]</u>	5/23/19	14:30	<input type="checkbox"/> Direct Exposure (Residential) <input type="checkbox"/> GW <input type="checkbox"/> Other	<input checked="" type="checkbox"/> RCP Cert <input type="checkbox"/> GW Protection <input type="checkbox"/> SW Protection <input checked="" type="checkbox"/> GA Mobility <input type="checkbox"/> GB Mobility <input checked="" type="checkbox"/> Residential DEC <input checked="" type="checkbox"/> IIC DEC <input type="checkbox"/> Other	<input type="checkbox"/> MCP Certification <input type="checkbox"/> GW-1 <input type="checkbox"/> GW-2 <input type="checkbox"/> GW-3 <input type="checkbox"/> S-1 <input type="checkbox"/> S-2 <input type="checkbox"/> S-3 <input type="checkbox"/> MWRA eSMART <input type="checkbox"/> Other	<input checked="" type="checkbox"/> Excel <input type="checkbox"/> PDF <input type="checkbox"/> GIS/Key <input type="checkbox"/> EQUIS <input type="checkbox"/> Other (geotech) Data Package <input type="checkbox"/> Tier II Checklist <input type="checkbox"/> Full Data Package* <input checked="" type="checkbox"/> Phoenix Std Report <input type="checkbox"/> Other	
Comments, Special Requirements or Regulations:		Turnaround: <input type="checkbox"/> 1 Day* <input type="checkbox"/> 2 Days* <input type="checkbox"/> 3 Days* <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Other		State where samples were collected: <u>CT</u>				* SURCHARGE APPLIES

Please copy BCaswell@tighebond.com & AJVaillancourt@TigheBond.com