

BORROUGH PARK

Summary of Soil Sample Analytical Data Fairfield, Connecticut Last Updated: 08/29/2019

Sample ID Sample Date Lab Sample ID		Criteria GA PMC	US EPA	BP S1 8/23/19 CD91932	BP S2 8/23/19 CD91933	BP S3 8/23/19 CD91934	BP S5 8/23/19 CD91935	BP S6 8/23/19 CD91936	BP S7 8/23/19 CD91937	BP S8 8/23/19 CD91938	BP S9 8/23/19 CD91939	BURS-S1 Parking Area -0001	BURS-S2 Lower Soccer Field -0002	BURS-S3 S9 Area -0003	BURS-S4 S8 Area -0004	BURS-S4A S9 Area -0005	BURS-S5 S9 Area -0006	BURS-S6 S5 Area -0007	BURS-S6A S5 Area -0008	BURS-S7 S5 Area -0009	BURS-S8 S5 Area -0010	BURS-S9 Upper Field S6 -0011	BURS-S9A Upper Field S6 -0012
Asbestos in Material by PLM ¹ Asbestos PLM 198.1 ²	NA	NA	1%	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	15%	ND	ND	ND
% Amosite	NA	NA	NA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	_	_	_	_	_	_	_	_	_	_	_	_
% Chrysotile	NA	NA	NA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	_	_	_	_	_	_	_	_	_	_	_	_
% Other	NA	NA	NA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	_	_	_	_	_	_	_	_	_	_	_	_
% Total Asbestos	NA	NA	1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-	-	-	-	-	-	-	-	-	-	-	-
Total Metals 6010D																							
Arsenic	10	NA	NA	4.82	4.84	4.94	4.82	6.24	5.42	4.84	6.75	-	-	-	-	-	-	-	-	-	-	-	-
Lead	400	NA	NA	32.8	24.1	33.3	25.3	25.1	24.6	23	23.5	-	-	-	-	-	-	-	-	-	-	-	-
CTETPH 8015D (mg/Kg)	500	500	NA	<62	<60	<60	<59	<63	<59	<58	<63	-	-	-	-	-	-	-	-	-	-	-	-
PCBs SW8082A (mg/Kg)																							
PCB-1016	NE	NA	NA	< 0.42	< 0.39	< 0.39	< 0.4	< 0.42	< 0.39	< 0.39	< 0.41	_	-	_	_	_	-	-	_	_	_	_	-
PCB-1221	NE	NA	NA	< 0.42	< 0.39	< 0.39	< 0.4	< 0.42	< 0.39	< 0.39	< 0.41	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1232	NE	NA	NA	< 0.42	< 0.39	< 0.39	< 0.4	< 0.42	< 0.39	< 0.39	< 0.41	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1242	NE	NA	NA	< 0.42	< 0.39	< 0.39	< 0.4	< 0.42	< 0.39	< 0.39	< 0.41	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1248	NE	NA	NA	< 0.42	< 0.39	< 0.39	< 0.4	< 0.42	< 0.39	< 0.39	< 0.41	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1254	NE	NA	NA	< 0.42	< 0.39	< 0.39	< 0.4	< 0.42	< 0.39	< 0.39	< 0.41	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1260	NE	NA	NA	< 0.42	< 0.39	< 0.39	< 0.4	< 0.42	< 0.39	< 0.39	< 0.41	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1262	NE	NA	NA	< 0.42	< 0.39	< 0.39	< 0.4	< 0.42	< 0.39	< 0.39	< 0.41	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1268	NE	NA	NA	< 0.42	< 0.39	< 0.39	< 0.4	< 0.42	< 0.39	< 0.39	< 0.41	-	-	-	-	-	-	-	-	-	-	-	-
Total PCBs	1	NA	NA	<0.42	< 0.39	< 0.39	< 0.4	< 0.42	< 0.39	< 0.39	< 0.41												
PAHs SW8270D (mg/Kg)																							
2-Methylnaphthalene	270	0.56	NA	< 0.29	< 0.27	< 0.27	< 0.27	< 0.29	< 0.27	< 0.28	< 0.29	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	1,000	8	NA	< 0.29	< 0.27	< 0.27	< 0.27	< 0.29	< 0.27	<0.28	< 0.29	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	1,000	8	NA	< 0.29	< 0.27	< 0.27	< 0.27	< 0.29	< 0.27	< 0.28	< 0.29	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	1,000	40	NA	< 0.29	< 0.27	< 0.27	< 0.27	< 0.29	< 0.27	< 0.28	< 0.29	-	-	-	-	-	-	-	-	-	-	-	-
Benz(a)anthracene	1	1	NA	< 0.29	< 0.27	< 0.27	< 0.27	< 0.29	< 0.27	< 0.28	< 0.29	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	1	1	NA	< 0.29	< 0.27	< 0.27	< 0.27	< 0.29	< 0.27	<0.28	< 0.29	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	1	1	NA	< 0.29	< 0.27	< 0.27	< 0.27	< 0.29	< 0.27	<0.28	< 0.29	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(ghi)perylene	8.4	1	NA	< 0.29	< 0.27	< 0.27	< 0.27	< 0.29	< 0.27	<0.28	< 0.29	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	8.4	1	NA	< 0.29	< 0.27	< 0.27	< 0.27	< 0.29	< 0.27	<0.28	< 0.29	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	84	1	NA	< 0.29	< 0.27	< 0.27	0.27	< 0.29	< 0.27	<0.28	< 0.29	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	1	1	NA	<0.29	< 0.27	< 0.27	< 0.27	<0.29	< 0.27	<0.28	< 0.29	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	1,000	5.6	NA	< 0.29	< 0.27	< 0.27	0.39	< 0.29	< 0.27	<0.28	< 0.29	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	1,000	5.6	NA	<0.29	< 0.27	< 0.27	< 0.27	< 0.29	< 0.27	<0.28	< 0.29	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	1	1	NA	< 0.29	< 0.27	< 0.27	< 0.27	< 0.29	< 0.27	< 0.28	< 0.29	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	1,000	5.6	NA	<0.29	< 0.27	< 0.27	< 0.27	<0.29	< 0.27	<0.28	< 0.29	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	1,000	4	NA	<0.29	< 0.27	< 0.27	< 0.27	< 0.29	< 0.27	<0.28	< 0.29	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	1,000	4	NA	< 0.29	< 0.27	< 0.27	0.4	< 0.29	< 0.27	< 0.28	< 0.29	-	-	-	-	-	-	-	-	-	-	-	-

Pyrene 1,000 4 NA <0.29 <0.27 <0.27 0.4 <0.29 <0.27

CTDEEP RSRs- Connecticut Department of Energy and Environmental Protection Remediation Standard Regulations (June 27, 2013)
RES DEC-Residential Direct Exposure Criteria
GA PMC- Pollutant Mobility Criteria in a GA groundwater area
NE- Not established
NA- Not Applicable
CT ETPH- Connecticut Department of Public Health Extractable Total Petroleum Hydrocarbons
PAHs- Polycyclic Aromatic Hydrocarbons
PCBs- Polychlorinated Biphenyls

< xx indicates compound was not detected. Detection limit is provided.

xx indicates compound was not detected. Detection limit is provided.
 Boxed values indicate exceedances of RES DEC

Bold values indicate exceedances of I/C DEC

1- Asbestos analysis of Bulk Materials via EPA 600/R-93/116 Method Using Polarized Light Microscopy at EMSL Analytical, Inc.
2- Asbestos analysis of Bulk Materials via 40 CFR Part 763, Sub. E, App. E/NYS-DOH 198.1 (PLM) by Eastern Analytical Services, Inc.



EMSL Order: 241904728 Customer ID: TIGH85B

Customer PO: Project ID:

Attention: Brian Sirowich Phone: (203) 712-1118

Tighe & Bond Fax:

1000 Bridgeport Avenue #320 **Received Date:** 08/23/2019 1:40 PM

Project: 150439020/ BURROUGH PARK

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			<u>Asbestos</u>		
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
BURS1	Fence/parking area - fiberglass/gray/piece	Brown Fibrous	95% Glass	5% Non-fibrous (Other)	None Detected
241904728-0001		Homogeneous			
BURS2	Lower soccer field - green tile fragment	Green Non-Fibrous		100% Non-fibrous (Other)	None Detected
241904728-0002		Homogeneous			
BURS3	S-9 area - orange slag/mortar	Brown Non-Fibrous		15% Quartz 85% Non-fibrous (Other)	None Detected
241904728-0003		Homogeneous			
BURS4	S8 area - white concrete	Gray/White Non-Fibrous	10% Wollastonite	90% Non-fibrous (Other)	None Detected
241904728-0004		Homogeneous		50/ 0 /	N =
BURS4A 241904728-0005	S8 area - white concrete	Gray/White Non-Fibrous Homogeneous		5% Quartz 95% Non-fibrous (Other)	None Detected
				1000/ N 51 (01)	N 5 ()
BURS5	S9 area - white tile	Tan Non-Fibrous		100% Non-fibrous (Other)	None Detected
241904728-0006		Homogeneous			
BURS6	S5 area - red tile	Red Non-Fibrous		100% Non-fibrous (Other)	None Detected
241904728-0007		Homogeneous			
BURS6A 241904728-0008	S5 area - red tile				Not Analyzed
Sample material same a	as BURS6.				
BURS7	S5 area - white tile	Gray Non-Fibrous		85% Non-fibrous (Other)	15% Chrysotile
241904728-0009		Homogeneous			
BURS8	S5 area - concrete/mortar frag	Tan Non-Fibrous		5% Quartz 95% Non-fibrous (Other)	None Detected
241904728-0010		Homogeneous			
BURS9	Upper field S6 - red brick frags.	Red Non-Fibrous		100% Non-fibrous (Other)	None Detected
241904728-0011		Homogeneous			
BURS9A	Upper field S6 - red brick frags.				Not Analyzed
241904728-0012 Sample is the same ma	terial as BURS9.				

Initial report from: 08/26/2019 13:31:51



EMSL Order: 241904728
Customer ID: TIGH85B
Customer PO:

Project ID:

Analyst(s)	
Almedina Hodzic (10)	

Almedina Hodzic, Asbestos Laboratory Manager

Almedina Hodzic, Asbestos Laboratory Manager or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0,

Initial report from: 08/26/2019 13:31:51



Thursday, August 29, 2019

Attn: Brian Sirowich Tighe & Bond 213 Court St, Suite 1100 Middletown, CT 06457

Project ID: 150439020-BURROUGHS

SDG ID: GCD91932

Sample ID#s: CD91932 - CD91939

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,

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



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

Sample Id Cross Reference

August 29, 2019

SDG I.D.: GCD91932

Project ID: 150439020-BURROUGHS

Client Id	Lab Id	Matrix
BP S1	CD91932	SOIL
BP S2	CD91933	SOIL
BP S3	CD91934	SOIL
BP S5	CD91935	SOIL
BP S6	CD91936	SOIL
BP S7	CD91937	SOIL
BP S8	CD91938	SOIL
BP S9	CD91939	SOIL



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

Analysis Report

August 29, 2019

FOR: Attn: Brian Sirowich

Tighe & Bond

213 Court St, Suite 1100 Middletown, CT 06457

Sample InformationCustody InformationDateTimeMatrix:SOILCollected by:08/23/199:00Location Code:TIGHE-DASReceived by:CP08/23/1916:44

Rush Request: 24 Hour Analyzed by: see "By" below

P.O.#:

Laboratory Data

SDG ID: GCD91932

Phoenix ID: CD91932

Project ID: 150439020-BURROUGHS

Client ID: BP S1

Davamatar	Dagult	RL/	l laita	Dilution	Doto/Time	Dv	Deference
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
Arsenic	4.82	0.75	mg/Kg	1	08/24/19	EK	SW6010D
Lead	32.8	0.38	mg/Kg	1	08/24/19	EK	SW6010D
Percent Solid	80		%		08/23/19	VT	SW846-%Solid
Soil Extraction SVOA PAH	Completed				08/23/19	NM/NT/L	∨SW3545A
Extraction of CT ETPH	Completed				08/23/19	GG/VL	SW3545A
Extraction for PCB	Completed				08/23/19	BX/VT/J	s SW3540C
Total Metals Digest	Completed				08/23/19	JJ/AG/B	F SW3050B
TPH by GC (Extractable	Products)					
Ext. Petroleum H.C. (C9-C36)	ND	62	mg/Kg	1	08/24/19	KCA	CTETPH 8015D
Identification	ND		mg/Kg	1	08/24/19	KCA	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	71		%	1	08/24/19	KCA	50 - 150 %
PCB (Soxhlet SW3540C)						
PCB-1016	ND	420	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1221	ND	420	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1232	ND	420	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1242	ND	420	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1248	ND	420	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1254	ND	420	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1260	ND	420	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1262	ND	420	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1268	ND	420	ug/Kg	10	08/25/19	SC	SW8082A
QA/QC Surrogates							
% DCBP	48		%	10	08/25/19	SC	30 - 150 %
% DCBP (Confirmation)	39		%	10	08/25/19	SC	30 - 150 %
% TCMX	50		%	10	08/25/19	SC	30 - 150 %

Project ID: 150439020-BURROUGHS Phoenix I.D.: CD91932

Client ID: BP S1

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
% TCMX (Confirmation)	45		%	10	08/25/19	SC	30 - 150 %
Polynuclear Aromatic I	HC						
2-Methylnaphthalene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Acenaphthene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Acenaphthylene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Anthracene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Benz(a)anthracene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(a)pyrene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(b)fluoranthene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(ghi)perylene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(k)fluoranthene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Chrysene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Fluoranthene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Fluorene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Naphthalene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Phenanthrene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Pyrene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	60		%	1	08/24/19	WB	30 - 130 %
% Nitrobenzene-d5	68		%	1	08/24/19	WB	30 - 130 %
% Terphenyl-d14	53		%	1	08/24/19	WB	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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

August 29, 2019

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



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

Analysis Report

August 29, 2019

FOR: Attn: Brian Sirowich

Tighe & Bond

213 Court St, Suite 1100 Middletown, CT 06457

Sample Information Custody Information Date <u>Time</u> SOIL Collected by: 08/23/19 Matrix: 9:15 Received by: Location Code: TIGHE-DAS CP 08/23/19 16:44

Rush Request: 24 Hour Analyzed by: see "By" below

RI/

P.O.#:

Laboratory Data SDG ID: GCD91932 Phoenix ID: CD91933

150439020-BURROUGHS Project ID:

Client ID: BP S2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference	
Arsenic	4.84	0.73	mg/Kg	1	08/24/19	EK	SW6010D	
Lead	24.1	0.37	mg/Kg	1	08/24/19	EK	SW6010D	
Percent Solid	83		%		08/23/19	VT	SW846-%Solid	
Soil Extraction SVOA PAH	Completed				08/23/19	NM/NT/L	∨SW3545A	
Extraction of CT ETPH	Completed				08/23/19	GG/VL	SW3545A	
Extraction for PCB	Completed				08/23/19	BX/VT/J	s SW3540C	
Total Metals Digest	Completed				08/23/19	JJ/AG/B	F SW3050B	
TPH by GC (Extractable	e Products	<u>s)</u>						
Ext. Petroleum H.C. (C9-C36)	ND		mg/Kg	1	08/24/19	KCA	CTETPH 8015D	
Identification	ND		mg/Kg	1	08/24/19	KCA	CTETPH 8015D	
QA/QC Surrogates								
% n-Pentacosane	70		%	1	08/24/19	KCA	50 - 150 %	
PCB (Soxhlet SW35400	<u>C)</u>							
PCB-1016	ND	390	ug/Kg	10	08/24/19	SC	SW8082A	
PCB-1221	ND	390	ug/Kg	10	08/24/19	SC	SW8082A	
PCB-1232	ND	390	ug/Kg	10	08/24/19	SC	SW8082A	
PCB-1242	ND	390	ug/Kg	10	08/24/19	SC	SW8082A	
PCB-1248	ND	390	ug/Kg	10	08/24/19	SC	SW8082A	
PCB-1254	ND	390	ug/Kg	10	08/24/19	SC	SW8082A	
PCB-1260	ND	390	ug/Kg	10	08/24/19	SC	SW8082A	
PCB-1262	ND	390	ug/Kg	10	08/24/19	SC	SW8082A	
PCB-1268	ND	390	ug/Kg	10	08/24/19	SC	SW8082A	
QA/QC Surrogates								
% DCBP	34		%	10	08/24/19	SC	30 - 150 %	
% DCBP (Confirmation)	29		%	10	08/24/19	SC	30 - 150 %	3
% TCMX	42		%	10	08/24/19	SC	30 - 150 %	

Project ID: 150439020-BURROUGHS Phoenix I.D.: CD91933

Client ID: BP S2

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
% TCMX (Confirmation)	40		%	10	08/24/19	SC	30 - 150 %
Polynuclear Aromatic HO							
2-Methylnaphthalene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Acenaphthene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Anthracene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benz(a)anthracene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(a)pyrene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(b)fluoranthene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(ghi)perylene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(k)fluoranthene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Chrysene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Fluoranthene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Fluorene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Phenanthrene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Pyrene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	66		%	1	08/24/19	WB	30 - 130 %
% Nitrobenzene-d5	73		%	1	08/24/19	WB	30 - 130 %
% Terphenyl-d14	65		%	1	08/24/19	WB	30 - 130 %

^{3 =} This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

August 29, 2019

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



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

Analysis Report

August 29, 2019

FOR: Attn: Brian Sirowich

Tighe & Bond

213 Court St, Suite 1100 Middletown, CT 06457

Sample InformationCustody InformationDateTimeMatrix:SOILCollected by:08/23/199:20Location Code:TIGHE-DASReceived by:CP08/23/1916:44

Rush Request: 24 Hour Analyzed by: see "By" below

P.O.#:

<u>Laboratory Data</u>

SDG ID: GCD91932

Phoenix ID: CD91934

Project ID: 150439020-BURROUGHS

Client ID: BP S3

		RL/			-		
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
Arsenic	4.94	0.80	mg/Kg	1	08/24/19	EK	SW6010D
Lead	33.3	0.40	mg/Kg	1	08/24/19	EK	SW6010D
Percent Solid	83		%		08/23/19	VT	SW846-%Solid
Soil Extraction SVOA PAH	Completed				08/23/19	NM/NT/L	vSW3545A
Extraction of CT ETPH	Completed				08/23/19	GG/VL	SW3545A
Extraction for PCB	Completed				08/26/19	BX/VT	SW3540C
Total Metals Digest	Completed				08/23/19	JJ/AG/B	F SW3050B
TPH by GC (Extractable	Products)					
Ext. Petroleum H.C. (C9-C36)	ND	60	mg/Kg	1	08/24/19	KCA	CTETPH 8015D
Identification	ND		mg/Kg	1	08/24/19	KCA	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	66		%	1	08/24/19	KCA	50 - 150 %
PCB (Soxhlet SW3540C	3)						
PCB-1016	ND	390	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1221	ND	390	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1232	ND	390	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1242	ND	390	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1248	ND	390	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1254	ND	390	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1260	ND	390	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1262	ND	390	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1268	ND	390	ug/Kg	10	08/27/19	SC	SW8082A
QA/QC Surrogates							
% DCBP	93		%	10	08/27/19	SC	30 - 150 %
% DCBP (Confirmation)	102		%	10	08/27/19	SC	30 - 150 %
% TCMX	93		%	10	08/27/19	SC	30 - 150 %

Project ID: 150439020-BURROUGHS Phoenix I.D.: CD91934

Client ID: BP S3

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
% TCMX (Confirmation)	103		%	10	08/27/19	SC	30 - 150 %
Polynuclear Aromatic	HC						
2-Methylnaphthalene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Acenaphthene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Anthracene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benz(a)anthracene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(a)pyrene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(b)fluoranthene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(ghi)perylene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(k)fluoranthene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Chrysene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Fluoranthene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Fluorene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Phenanthrene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Pyrene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	52		%	1	08/24/19	WB	30 - 130 %
% Nitrobenzene-d5	59		%	1	08/24/19	WB	30 - 130 %
% Terphenyl-d14	49		%	1	08/24/19	WB	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

August 29, 2019

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



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

Analysis Report

August 29, 2019

FOR: Attn: Brian Sirowich

Tighe & Bond

213 Court St, Suite 1100 Middletown, CT 06457

Sample InformationCustody InformationDateTimeMatrix:SOILCollected by:08/23/199:25Location Code:TIGHE-DASReceived by:CP08/23/1916:44

Rush Request: 48 Hour Analyzed by: see "By" below

P.O.#:

<u>Laboratory Data</u> SDG ID: GCD91932

Phoenix ID: CD91935

Project ID: 150439020-BURROUGHS

Client ID: BP S5

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
Arsenic	4.82	0.73	mg/Kg	1	08/24/19	EK	SW6010D
Lead	25.3	0.36	mg/Kg	1	08/24/19	EK	SW6010D
Percent Solid	84	0.00	g/.tg	•	08/23/19	VT	SW846-%Solid
Soil Extraction SVOA PAH	Completed		,0				vSW3545A
Extraction of CT ETPH	Completed				08/23/19		SW3545A
Extraction for PCB	Completed				08/26/19		SW3540C
Total Metals Digest	Completed				08/23/19		F SW3050B
TPH by GC (Extractable	Products	s)					
Ext. Petroleum H.C. (C9-C36)	ND	59	mg/Kg	1	08/24/19	KCA	CTETPH 8015D
Identification	ND		mg/Kg	1	08/24/19	KCA	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	59		%	1	08/24/19	KCA	50 - 150 %
PCB (Soxhlet SW3540C	E)						
PCB-1016	 ND	400	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1221	ND	400	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1232	ND	400	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1242	ND	400	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1248	ND	400	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1254	ND	400	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1260	ND	400	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1262	ND	400	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1268	ND	400	ug/Kg	10	08/27/19	SC	SW8082A
QA/QC Surrogates							
% DCBP	73		%	10	08/27/19	SC	30 - 150 %
% DCBP (Confirmation)	81		%	10	08/27/19	SC	30 - 150 %
% TCMX	92		%	10	08/27/19	SC	30 - 150 %

Project ID: 150439020-BURROUGHS Phoenix I.D.: CD91935

Client ID: BP S5

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
% TCMX (Confirmation)	82		%	10	08/27/19	SC	30 - 150 %
Polynuclear Aromatic	: HC						
2-Methylnaphthalene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Acenaphthene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Anthracene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benz(a)anthracene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(a)pyrene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(b)fluoranthene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(ghi)perylene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(k)fluoranthene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Chrysene	270	270	ug/Kg	1	08/24/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Fluoranthene	390	270	ug/Kg	1	08/24/19	WB	SW8270D
Fluorene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Phenanthrene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Pyrene	400	270	ug/Kg	1	08/24/19	WB	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	55		%	1	08/24/19	WB	30 - 130 %
% Nitrobenzene-d5	61		%	1	08/24/19	WB	30 - 130 %
% Terphenyl-d14	50		%	1	08/24/19	WB	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

August 29, 2019

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



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

Analysis Report

August 29, 2019

FOR: Attn: Brian Sirowich

Tighe & Bond

213 Court St, Suite 1100 Middletown, CT 06457

Sample InformationCustody InformationDateTimeMatrix:SOILCollected by:08/23/199:30Location Code:TIGHE-DASReceived by:CP08/23/1916:44

Rush Request: 48 Hour Analyzed by: see "By" below

P.O.#:

<u>Laboratory Data</u>

SDG ID: GCD91932

Phoenix ID: CD91936

Project ID: 150439020-BURROUGHS

Client ID: BP S6

Б	D 1	RL/	11.7	D'' ('	D (/T'	_	D (
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
Arsenic	6.24	0.77	mg/Kg	1	08/24/19	EK	SW6010D
Lead	25.1	0.39	mg/Kg	1	08/24/19	EK	SW6010D
Percent Solid	79		%		08/23/19	VT	SW846-%Solid
Soil Extraction SVOA PAH	Completed				08/23/19	NM/NT/L	∨SW3545A
Extraction of CT ETPH	Completed				08/23/19	GG/VL	SW3545A
Extraction for PCB	Completed				08/26/19	BX/VT	SW3540C
Total Metals Digest	Completed				08/23/19	JJ/AG/BI	F SW3050B
TPH by GC (Extractable	Products)					
Ext. Petroleum H.C. (C9-C36)	ND	63	mg/Kg	1	08/26/19	KCA	CTETPH 8015D
Identification	ND		mg/Kg	1	08/26/19	KCA	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	55		%	1	08/26/19	KCA	50 - 150 %
PCB (Soxhlet SW3540C	2)						
PCB-1016	ND	420	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1221	ND	420	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1232	ND	420	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1242	ND	420	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1248	ND	420	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1254	ND	420	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1260	ND	420	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1262	ND	420	ug/Kg	10	08/27/19	SC	SW8082A
PCB-1268	ND	420	ug/Kg	10	08/27/19	SC	SW8082A
QA/QC Surrogates							
% DCBP	82		%	10	08/27/19	SC	30 - 150 %
% DCBP (Confirmation)	97		%	10	08/27/19	SC	30 - 150 %
% TCMX	103		%	10	08/27/19	SC	30 - 150 %

Project ID: 150439020-BURROUGHS Phoenix I.D.: CD91936

Client ID: BP S6

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
% TCMX (Confirmation)	95		%	10	08/27/19	SC	30 - 150 %
Polynuclear Aromatic	HC						
2-Methylnaphthalene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Acenaphthene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Acenaphthylene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Anthracene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Benz(a)anthracene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(a)pyrene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(b)fluoranthene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(ghi)perylene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(k)fluoranthene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Chrysene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Fluoranthene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Fluorene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Naphthalene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Phenanthrene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Pyrene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	57		%	1	08/24/19	WB	30 - 130 %
% Nitrobenzene-d5	65		%	1	08/24/19	WB	30 - 130 %
% Terphenyl-d14	55		%	1	08/24/19	WB	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

August 29, 2019

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



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

Analysis Report

August 29, 2019

FOR: Attn: Brian Sirowich

Tighe & Bond

213 Court St, Suite 1100 Middletown, CT 06457

Sample InformationCustody InformationDateTimeMatrix:SOILCollected by:08/23/199:40Location Code:TIGHE-DASReceived by:CP08/23/1916:44

Rush Request: 24 Hour Analyzed by: see "By" below

P.O.#:

Laboratory Data

SDG ID: GCD91932

Phoenix ID: CD91937

Project ID: 150439020-BURROUGHS

Client ID: BP S7

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
Arsenic	5.42	0.77	mg/Kg	1	08/24/19	EK	SW6010D
Lead	24.6	0.39	mg/Kg	1	08/24/19	EK	SW6010D
Percent Solid	84		%		08/23/19	VT	SW846-%Solid
Soil Extraction SVOA PAH	Completed				08/23/19	NM/NT/L	∨SW3545A
Extraction of CT ETPH	Completed				08/23/19	GG/VL	SW3545A
Extraction for PCB	Completed				08/23/19	BX/VT/J	s SW3540C
Total Metals Digest	Completed				08/23/19	JJ/AG/BI	F SW3050B
TPH by GC (Extractable	e Products	<u>)</u>					
Ext. Petroleum H.C. (C9-C36)	ND	 59	mg/Kg	1	08/25/19	KCA	CTETPH 8015D
Identification	ND		mg/Kg	1	08/25/19	KCA	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	69		%	1	08/25/19	KCA	50 - 150 %
PCB (Soxhlet SW35400	<u>C)</u>						
PCB-1016	ND	390	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1221	ND	390	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1232	ND	390	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1242	ND	390	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1248	ND	390	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1254	ND	390	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1260	ND	390	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1262	ND	390	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1268	ND	390	ug/Kg	10	08/25/19	SC	SW8082A
QA/QC Surrogates							
% DCBP	35		%	10	08/25/19	SC	30 - 150 %
% DCBP (Confirmation)	34		%	10	08/25/19	SC	30 - 150 %
% TCMX	33		%	10	08/25/19	SC	30 - 150 %

Project ID: 150439020-BURROUGHS Phoenix I.D.: CD91937

Client ID: BP S7

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
% TCMX (Confirmation)	31		%	10	08/25/19	SC	30 - 150 %
Polynuclear Aromatic	HC_						
2-Methylnaphthalene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Acenaphthene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Anthracene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benz(a)anthracene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(a)pyrene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(b)fluoranthene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(ghi)perylene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(k)fluoranthene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Chrysene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Fluoranthene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Fluorene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Phenanthrene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
Pyrene	ND	270	ug/Kg	1	08/24/19	WB	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	60		%	1	08/24/19	WB	30 - 130 %
% Nitrobenzene-d5	65		%	1	08/24/19	WB	30 - 130 %
% Terphenyl-d14	58		%	1	08/24/19	WB	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

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Phyllis Shiller, Laboratory Director

August 29, 2019

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



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

Analysis Report

August 29, 2019

FOR: Attn: Brian Sirowich

Tighe & Bond

213 Court St, Suite 1100 Middletown, CT 06457

Sample InformationCustody InformationDateTimeMatrix:SOILCollected by:08/23/199:45Location Code:TIGHE-DASReceived by:CP08/23/1916:44

Rush Request: 24 Hour Analyzed by: see "By" below

D. /

P.O.#:

Laboratory Data

SDG ID: GCD91932
Phoenix ID: CD91938

Project ID: 150439020-BURROUGHS

Client ID: BP S8

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
Arsenic	4.84	0.73	mg/Kg	1	08/24/19	EK	SW6010D
Lead	23.0	0.36	mg/Kg	1	08/24/19	EK	SW6010D
Percent Solid	84		%		08/23/19	VT	SW846-%Solid
Soil Extraction SVOA PAH	Completed				08/23/19	NM/NT/L	∨SW3545A
Extraction of CT ETPH	Completed				08/23/19	GG/VL	SW3545A
Extraction for PCB	Completed				08/23/19	BX/VT/J	SSW3540C
Total Metals Digest	Completed				08/23/19	JJ/AG/BI	= SW3050B
TPH by GC (Extractable	e Products)					
Ext. Petroleum H.C. (C9-C36)	ND	 58	mg/Kg	1	08/26/19	KCA	CTETPH 8015D
Identification	ND		mg/Kg	1	08/26/19	KCA	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	103		%	1	08/26/19	KCA	50 - 150 %
PCB (Soxhlet SW35400	<u>C)</u>						
PCB-1016	 ND	390	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1221	ND	390	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1232	ND	390	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1242	ND	390	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1248	ND	390	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1254	ND	390	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1260	ND	390	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1262	ND	390	ug/Kg	10	08/25/19	SC	SW8082A
PCB-1268	ND	390	ug/Kg	10	08/25/19	SC	SW8082A
QA/QC Surrogates							
% DCBP	65		%	10	08/25/19	SC	30 - 150 %
% DCBP (Confirmation)	58		%	10	08/25/19	SC	30 - 150 %
% TCMX	62		%	10	08/25/19	SC	30 - 150 %

Project ID: 150439020-BURROUGHS Phoenix I.D.: CD91938

Client ID: BP S8

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
% TCMX (Confirmation)	58		%	10	08/25/19	SC	30 - 150 %
Polynuclear Aromatic	HC_						
2-Methylnaphthalene	ND	280	ug/Kg	1	08/24/19	WB	SW8270D
Acenaphthene	ND	280	ug/Kg	1	08/24/19	WB	SW8270D
Acenaphthylene	ND	280	ug/Kg	1	08/24/19	WB	SW8270D
Anthracene	ND	280	ug/Kg	1	08/24/19	WB	SW8270D
Benz(a)anthracene	ND	280	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(a)pyrene	ND	280	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(b)fluoranthene	ND	280	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(ghi)perylene	ND	280	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(k)fluoranthene	ND	280	ug/Kg	1	08/24/19	WB	SW8270D
Chrysene	ND	280	ug/Kg	1	08/24/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	280	ug/Kg	1	08/24/19	WB	SW8270D
Fluoranthene	ND	280	ug/Kg	1	08/24/19	WB	SW8270D
Fluorene	ND	280	ug/Kg	1	08/24/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	280	ug/Kg	1	08/24/19	WB	SW8270D
Naphthalene	ND	280	ug/Kg	1	08/24/19	WB	SW8270D
Phenanthrene	ND	280	ug/Kg	1	08/24/19	WB	SW8270D
Pyrene	ND	280	ug/Kg	1	08/24/19	WB	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	55		%	1	08/24/19	WB	30 - 130 %
% Nitrobenzene-d5	64		%	1	08/24/19	WB	30 - 130 %
% Terphenyl-d14	55		%	1	08/24/19	WB	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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

August 29, 2019

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



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

Analysis Report

August 29, 2019

FOR: Attn: Brian Sirowich

Tighe & Bond

213 Court St, Suite 1100 Middletown, CT 06457

Sample InformationCustody InformationDateTimeMatrix:SOILCollected by:08/23/199:50Location Code:TIGHE-DASReceived by:CP08/23/1916:44

Rush Request: 48 Hour Analyzed by: see "By" below

P.O.#:

<u>Laboratory Data</u> SDG ID: GCD91932

Phoenix ID: CD91939

Project ID: 150439020-BURROUGHS

Client ID: BP S9

D	5 "	RL/	11.5	5	D . / T'	_	D (
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference	
Arsenic	6.75	0.81	mg/Kg	1	08/24/19	EK	SW6010D	
Lead	23.5	0.41	mg/Kg	1	08/24/19	EK	SW6010D	
Percent Solid	79		%		08/23/19	VT	SW846-%Solid	
Soil Extraction SVOA PAH	Completed				08/23/19	NM/NT/L	.∨SW3545A	
Extraction of CT ETPH	Completed				08/23/19	GG/VL	SW3545A	
Extraction for PCB	Completed				08/23/19	BX/VT/J	s SW3540C	
Total Metals Digest	Completed				08/23/19	JJ/AG/B	F SW3050B	
TPH by GC (Extractable	e Products	<u>s)</u>						
Ext. Petroleum H.C. (C9-C36)	ND	63	mg/Kg	1	08/24/19	KCA	CTETPH 8015D	
Identification	ND		mg/Kg	1	08/24/19	KCA	CTETPH 8015D	
QA/QC Surrogates								
% n-Pentacosane	74		%	1	08/24/19	KCA	50 - 150 %	
PCB (Soxhlet SW35400	<u>C)</u>							
PCB-1016	ND	410	ug/Kg	10	08/25/19	PS	SW8082A	
PCB-1221	ND	410	ug/Kg	10	08/25/19	PS	SW8082A	
PCB-1232	ND	410	ug/Kg	10	08/25/19	PS	SW8082A	
PCB-1242	ND	410	ug/Kg	10	08/25/19	PS	SW8082A	
PCB-1248	ND	410	ug/Kg	10	08/25/19	PS	SW8082A	
PCB-1254	ND	410	ug/Kg	10	08/25/19	PS	SW8082A	
PCB-1260	ND	410	ug/Kg	10	08/25/19	PS	SW8082A	
PCB-1262	ND	410	ug/Kg	10	08/25/19	PS	SW8082A	
PCB-1268	ND	410	ug/Kg	10	08/25/19	PS	SW8082A	
QA/QC Surrogates								
% DCBP	19		%	10	08/25/19	PS	30 - 150 %	3
% DCBP (Confirmation)	15		%	10	08/25/19	PS	30 - 150 %	3
% TCMX	33		%	10	08/25/19	PS	30 - 150 %	

Project ID: 150439020-BURROUGHS

Client ID: BP S9

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
% TCMX (Confirmation)	31		%	10	08/25/19	PS	30 - 150 %
Polynuclear Aromatic Ho	<u>C</u>						
2-Methylnaphthalene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Acenaphthene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Acenaphthylene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Anthracene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Benz(a)anthracene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(a)pyrene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(b)fluoranthene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(ghi)perylene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Benzo(k)fluoranthene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Chrysene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Fluoranthene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Fluorene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Naphthalene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Phenanthrene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
Pyrene	ND	290	ug/Kg	1	08/24/19	WB	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	66		%	1	08/24/19	WB	30 - 130 %
% Nitrobenzene-d5	71		%	1	08/24/19	WB	30 - 130 %
% Terphenyl-d14	61		%	1	08/24/19	WB	30 - 130 %

^{3 =} This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

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

Comments:

PCB Comment:

Poor surrogate recovery was observed for PCBs. Sample was re-extracted with similar results.

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

August 29, 2019

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Phoenix I.D.: CD91939



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

QA/QC Report

August 29, 2019

QA/QC Data

SDG I.D.: GCD91932

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 493810 (mg/kg), CD91939) ICP Metals - Soil	QC Sam	ple No	: CD9121	8 (CD91	932, CI	D91933	, CD919	934, CE	91935	, CD919	936, CE)91937,	CD91938,
Arsenic	BRL	0.67	8.0	7.2	NC	95.3	102	6.8	90.8			75 - 125	30
Lead	BRL	0.33	48.4	42.2	13.7	90.8	94.1	3.6	84.7			75 - 125	30



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QA/QC Report

% TCMX (Surrogate Rec) (Confirm

%

QA/QC Data

August 29, 2019	QA/QC Data SDG I.D.: GCD9193							932			
Parameter	Blank	BIk RL		LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 493763 (mg/Kg), (CD91938, CD91939)	2C Sam	ple No: CD88	987 (CD91932, C	D9193	3, CD91	934, CE	91935	5, CD91	936, C	D91937,	
TPH by GC (Extractable P	roduc	ts) - Soil									
Ext. Petroleum H.C. (C9-C36)	ND	50		83	80	3.7	99	110	10.5	60 - 120	30
% n-Pentacosane	53	%		65	60	8.0	89	102	13.6	50 - 150	30
Comment:											
Additional surrogate criteria: LCS a normalized based on the alkane ca		ce range is 60-12	20% MS acceptanc	e range	50-150%	6. The E	TPH/DF	RO LCS F	nas bee	n	
QA/QC Batch 493816 (ug/Kg), Q	C Sam	ole No: CD899	54 10X (CD9193	2, CD9	1933, C	D91937	, CD91	1938, CI	D91939	9)	
Polychlorinated Biphenyls	- Soil										
PCB-1016	ND	170		91	77	16.7				40 - 140	30
PCB-1221	ND	170								40 - 140	30
PCB-1232	ND	170								40 - 140	30
PCB-1242	ND	170								40 - 140	30
PCB-1248	ND	170								40 - 140	30
PCB-1254	ND	170								40 - 140	30
PCB-1260	ND	170		112	96	15.4				40 - 140	30
PCB-1262	ND	170								40 - 140	30
PCB-1268	ND	170								40 - 140	30
% DCBP (Surrogate Rec)	114	%		116	97	17.8				30 - 150	30
% DCBP (Surrogate Rec) (Confirm	109	%		118	92	24.8				30 - 150	30
% TCMX (Surrogate Rec)	91	%		89	76	15.8				30 - 150	30
% TCMX (Surrogate Rec) (Confirm Comment:	94	%		97	81	18.0				30 - 150	30
Due to PCB in the unspiked sample	e, MS/MS	SD could not be	reported.								
QA/QC Batch 494005 (ug/Kg), Q	C Sam	ole No: CD916	17 10X (CD9193	4, CD9	1935, C	D91936	, CD9	1939)			
Polychlorinated Biphenyls	- Soil										
PCB-1016	ND	170		96	86	11.0	42	40	4.9	40 - 140	30
PCB-1221	ND	170								40 - 140	30
PCB-1232	ND	170								40 - 140	30
PCB-1242	ND	170								40 - 140	30
PCB-1248	ND	170								40 - 140	30
PCB-1254	ND	170								40 - 140	30
PCB-1260	ND	170		89	96	7.6	52	49	5.9	40 - 140	30
PCB-1262	ND	170								40 - 140	30
PCB-1268	ND	170								40 - 140	30
% DCBP (Surrogate Rec)	86	%		84	105	22.2	57	53	7.3	30 - 150	30
% DCBP (Surrogate Rec) (Confirm	96	%		83	93	11.4	50	46	8.3	30 - 150	30
% TCMX (Surrogate Rec)	64	%		89	94	5.5	35	37	5.6	30 - 150	30
0.7010.40		0.4									

2.2

36

38

5.4 30 - 150

QA/QC Data

Blk LCSD LCS MSD RPD LCS MS Rec % Blank RL % RPD RPD % Limits Limits Parameter

QA/QC Batch 493759 (ug/k CD91939)	g), QC Sam	ple No: CD9	1245 (CD91932, (CD91933,	CD919	934, CD	91935,	CD919	936, CE	91937, (CD919	38,
Polynuclear Aromatic	HC - Soil											
2-Methylnaphthalene	ND	230		58	58	0.0	60	54	10.5	30 - 130	30	
Acenaphthene	ND	230		60	66	9.5	61	54	12.2	30 - 130	30	
Acenaphthylene	ND	230		59	59	0.0	58	60	3.4	30 - 130	30	
Anthracene	ND	230		61	66	7.9	70	57	20.5	30 - 130	30	
Benz(a)anthracene	ND	230		65	66	1.5	64	60	6.5	30 - 130	30	
Benzo(a)pyrene	ND	230		62	73	16.3	61	58	5.0	30 - 130	30	
Benzo(b)fluoranthene	ND	230		63	80	23.8	53	56	5.5	30 - 130	30	
Benzo(ghi)perylene	ND	230		61	64	4.8	51	55	7.5	30 - 130	30	
Benzo(k)fluoranthene	ND	230		69	81	16.0	55	59	7.0	30 - 130	30	
Chrysene	ND	230		62	66	6.3	61	55	10.3	30 - 130	30	
Dibenz(a,h)anthracene	ND	230		66	70	5.9	61	53	14.0	30 - 130	30	
Fluoranthene	ND	230		64	67	4.6	89	62	35.8	30 - 130	30	r
Fluorene	ND	230		63	66	4.7	66	71	7.3	30 - 130	30	
Indeno(1,2,3-cd)pyrene	ND	230		65	68	4.5	57	52	9.2	30 - 130	30	
Naphthalene	ND	230		54	58	7.1	56	52	7.4	30 - 130	30	
Phenanthrene	ND	230		60	63	4.9	64	58	9.8	30 - 130	30	
Pyrene	ND	230		65	81	21.9	86	64	29.3	30 - 130	30	
% 2-Fluorobiphenyl	52	%		54	63	15.4	64	49	26.5	30 - 130	30	
% Nitrobenzene-d5	57	%		60	62	3.3	63	53	17.2	30 - 130	30	
% Terphenyl-d14	51	%		58	71	20.2	72	59	19.8	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%)

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

SDG I.D.: GCD91932

%

%

August 29, 2019

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

Thursday, August 29, 2019 Criteria: CT: GAM, RC

Sample Criteria Exceedances Report GCD91932 - TIGHE-DAS

State: CT

State: C1

RL Analysis
SampNo Acode Phoenix Analyte Criteria Units
Result RL Criteria Units

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 exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

^{***} No Data to Display ***



REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name: Phoenix Environmental Labs, Inc. Client: Tighe & Bond

Project Location: 150439020-BURROUGHS Project Number:

Laboratory Sample ID(s): CD91932-CD91939 Sampling Date(s): 8/23/2019

List RCP Methods Used (e.g., 8260, 8270, et cetera) 6010, 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?	✓ Yes □ No
1A	Were the method specified preservation and holding time requirements met?	✓ Yes □ No
1B	<u>VPH and EPH methods only:</u> Was the VPH or EPH method conducted without significant modifications (see section 11.3 of respective RCP methods)	☐ Yes ☐ No ☑ NA
2	Were all samples received by the laboratory in a condition consistent with that described on the associated Chain-of-Custody document(s)?	✓ Yes □ No
3	Were samples received at an appropriate temperature (< 6 Degrees C)?	✓ Yes □ No □ NA
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	✓ Yes □ No
5	a) Were reporting limits specified or referenced on the chain-of-custody?	✓ Yes □ No
	b) Were these reporting limits met?	✓ Yes □ 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?	☐ Yes ☑ No
7	Are project-specific matrix spikes and laboratory duplicates included in the data set?	☐ Yes ☑ 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 penalt knowledge and belief and based upon my personal in information contained in this analytical report, such	nquiry of those responsible for providing the
Authorized Signature:	Position: Assistant Lab Director
Printed Name: Greg Lawrence	Date: Thursday, August 29, 2019
Name of Laboratory Phoenix Environmental Labs, Inc.	

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



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



RCP Certification Report

August 29, 2019 SDG I.D.: GCD91932

SDG Comments

Metals Analysis:

The client requested a shorter list of elements than the 6010 RCP list. Only Arsenic and Lead are reported as requested on the chain of custody.

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.

ETPH Narration

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

Instrument:

AU-XL1 08/25/19-1

Keith Aloisa, Chemist 08/25/19

CD91938

The initial calibration (ETPH805I) 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 (825A003_1) and contained the following outliers: C36 34.7%L (20%)

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

AU-XL2 08/23/19-1

Jeff Bucko, Chemist 08/23/19

CD91932, CD91933, CD91934, CD91935, CD91939

The initial calibration (ETPH715I) 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 (823A003_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.

AU-XL2 08/25/19-1

Keith Aloisa, Chemist 08/25/19

CD91936, CD91937

The initial calibration (ETPH715I) 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 (825A003_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 493763 (CD88987)

CD91932, CD91933, CD91934, CD91935, CD91936, CD91937, CD91938, CD91939

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.

ICP Metals Narration

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

Instrument:

ARCOS 08/24/19 08:05 Emily Kolominskaya, Chemist 08/24/19 CD91932, CD91933, CD91934, CD91935, CD91936, CD91937, CD91938, CD91939



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Certification Report

August 29, 2019 SDG I.D.: GCD91932

ICP Metals Narration

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 493810 (CD91218)

CD91932, CD91933, CD91934, CD91935, CD91936, CD91937, CD91938, CD91939

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

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

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

PCB Narration

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

Instrument:

AU-ECD1 08/27/19-1

Saadia Chudary, Chemist 08/27/19

CD91934

The initial calibration (PC814Al) RSD for the compound list was less than 20% except for the following compounds: None. The initial calibration (PC814Bl) 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.

AU-ECD24 08/24/19-1

Adam Werner, Chemist 08/24/19

CD91932, CD91933, CD91937

The initial calibration (PC719Al) RSD for the compound list was less than 20% except for the following compounds: None. The initial calibration (PC719Bl) 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.

AU-ECD48 08/27/19-1

Saadia Chudary, Chemist 08/27/19

CD91935, CD91936

The initial calibration (PC819Al) RSD for the compound list was less than 20% except for the following compounds: None. The initial calibration (PC819Bl) 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.

AU-ECD8 08/23/19-1

Saadia Chudary, Chemist 08/23/19

CD91938, CD91939

The initial calibration (PC730Al) RSD for the compound list was less than 20% except for the following compounds: None. The initial calibration (PC730Bl) 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 493816 (CD89954)

CD91932, CD91933, CD91937, CD91938, CD91939



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



RCP Certification Report

August 29, 2019 SDG I.D.: GCD91932

PCB Narration

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

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

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

Due to PCB in the unspiked sample, MS/MSD could not be reported.

Batch 494005 (CD91617)

CD91934, CD91935, CD91936, CD91939

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

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

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:

<u>CHEM28 08/24/19-1</u> Matt Richard, Chemist 08/24/19

CD91932, CD91933, CD91934, CD91935, CD91936, CD91937, CD91938, CD91939

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 (CHEM28/28_BN_0807):

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 (CHEM28/0824_03-28_BN_0807):

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

85% of target compounds met criteria.

The following compounds did not meet % deviation criteria: Benzo(ghi)perylene 36%L (30%), Dibenz(a,h)anthracene 36%L (30%), Indeno(1,2,3-cd)pyrene 33%L (30%)

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 493759 (CD91245)

CD91932, CD91933, CD91934, CD91935, CD91936, CD91937, CD91938, CD91939

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



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



RCP Certification Report

August 29, 2019 SDG I.D.: GCD91932

The samples were received at 4.6C with cooling initiated. (Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Coolant: IPK ICE No	Tempt (C Pg of Data Delivery/Contact Options:			Project P.O.	This section MUST be	Bottle Quantities.		1400/20			\$\\\ \alpha \\ \				,						Data Format	kxel PDF	☐ GIS/Key	EQUIS Offer	ا اه		Other Phoenix Std Report	CT EAVID DATA * SURCHARGE APPLIES	
2.70 1		Fax:	Email	roughs	Din Olsen Jill Liber	ALIOCA .				Sold Sold Sold Sold Sold Sold Sold Sold	8/2								→		MA	NCP Cert	GW Protection GW-2	<u>Б</u>	GA Mobility S-1 GW-1 S-1 GW-2 B-1 GW-3	Residential DEC S - 3 GW-1 S - 3 GW-2 S - 3 GW-3 Residential DEC S - 3 GW-1 S - 3 GW-2 S - 3 GW-3	I/C DEC	State where samples were collected:	
	CHAIN OF CUSTODY RECORD	587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040 Email: info@phoenixlabs.com Fax (860) 645-0823	Ses		2	OHOTE#	# J-009	Analysis	\ \ \	13 × 3	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1								7 > >		Time: RI CT	16. 44. Direct Exposure		O cw	I Time: ☐ Other ☐	<u> (4</u>		Applies	
	5	, AUT		- 1	501 to 100	70,400		ole - Information - Identification	Date: C	vurface Water WW =Waste Water Soil SD =Solid W =Wipe OIL =Oil	Sample Date Time Matrix Sampled Sampled	8173	91.6	9.20	4:25	1 430	9.40	94,6	√ 4:50		v: Date:	150/8 runs 8/23/19	,		Turk	✓ 1 Day* Z Days*	3 Days*	Other Other	
		FHOEINIX STATES INC.			Address: 213 Cauck St			Sampler's	Signature	Matrix Code: DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Soid W=Wipe OIL=O B=Bulk L=Liquid X =(Other)	PHOENIX USE ONLY SAMPLE # Identification	Bp	91933 88 52		Bg		කී	·	91939 BP 59		Relinguished by: Accepted by:	Home			Comments, Special Requirements or Regulations	DOS DESCOR			



Eastern Analytical Services, Inc.

Phone (914) 592-8380

4 Westchester Plaza Elmsford, New York 10523-1610 http://www.EASInc.com Fax (914) 592-8956

August 26, 2019

Mr. James T. Olsen Tighe & Bond 53 Southampton Road Westfield, MA 01085

RE: CPN 150439020 - Burroughs Park

EAS Batch No. 1906972

Dear Mr. Olsen:

Enclosed please find the laboratory results for the 8 bulk sample(s) received by Eastern Analytical Services, Inc. August 23, 2019. The analysis was performed in accordance with EPA/600/R-93/116 and NYS-DOH Item 198.1.

Thank you for allowing EAS, Inc. to provide Tighe & Bond with professional analytical services. If you have any questions or require additional information or assistance, please feel free to contact me at the number above or e-mail Lab@EASInc.com.

Sincerely,

EASTERN ANALYTICAL SERVICES, INC.

Paul Stascavage Laboratory Director

PS:om

Enclosures

Electronically Transmitted

August 23, 2019



EAS Batch No. 1906972

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 150439020 - Burroughs Park

Client:

Tighe & Bond

53 Southampton Road Westfield, MA 01085

Date Collected: Collected By:

08/23/2019 Brian Sirowich

Date Received:

08/23/2019 08/23/2019

Date Analyzed: Analyzed By:

Signature:

Ghayath Elias

Analytical Method: 40 CFR Part 763, Sub. E, App. E/NYS-DOH 198.1 (PLM)

NVLAP Lab Code: 101646-0

NYS Lab No.

10851

Sample ID Number

BP S1

BP S2

BP S3

BP S5

Page 1 of 2

Layer Number

Lab ID Number

2639691

2639692

2639693

2639694

Sample Location

Not Given

Not Given

Not Given

Not Given

Sample Description

Method of Quantification

Not Given

Visual Estimation

Not Given

Visual Estimation

Not Given

Visual Estimation

Not Given

Visual Estimation

-					
Appearance	Layered	No	No	No	No
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Brown	Brown	Brown	Brown
Sample Treatr	ment	Homogenized	Homogenized	Homogenized	Homogenized
Asbestos	% Amosite	0.0	0.0	0.0	0.0
Content	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous	% Fibrous Glass	0.0	0.0	0.0	0.0
Materials	% Cellulose	5.0	5.0	5.0	5.0
Present	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous	% Silicates	15.0	15.0	20.0	20.0
Materials	% Carbonates	20.0	20.0	20.0	20.0
Present	% Other	0.0	0.0	0.0	0.0
	% Unidentified	60.0	60.0	55.0	55.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.

AIHA Accreditation No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No.



EAS Batch No. 1906972

Eastern Analytical Services, Inc.

Bulk Sample Results

RE: CPN 150439020 - Burroughs Park

Client:

Tighe & Bond

53 Southampton Road Westfield, MA 01085

Date Collected: Collected By: Date Received:

Brian Sirowich 08/23/2019

08/23/2019

Date Analyzed: Analyzed By:

08/23/2019

Signature:

Ghayath Elias

Analytical Method: 40 CFR Part 763, Sub. E, App. E/NYS-DOH 198.1 (PLM)

NVLAP Lab Code: 101646-0

NYS Lab No.

10851

Sample ID Number

BP S6

BP S7

BP S8

BP S9

Page 2 of 2

Layer Number

Lab ID Number

2639695

2639696

2639697

2639698

Sample Location

Not Given

Not Given

Not Given

Not Given

Sample Description

Not Given

Not Given

Not Given

Not Given

Method of Qua	antification	Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	No	No	No	No
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Brown	Brown	Brown	Brown
Sample Treatn	nent	Homogenized	Homogenized	Homogenized	Homogenized
Asbestos	% Amosite	0.0	0.0	0.0	0.0
Content	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous	% Fibrous Glass	0.0	0.0	0.0	0.0
Materials	% Cellulose	5.0	5.0	5.0	5.0
Present	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous	% Silicates	25.0	15.0	15.0	15.0
Materials	% Carbonates	20.0	20.0	20.0	20.0
Present	% Other	0.0	0.0	0.0	0.0
	% Unidentified	50.0	60.0	60.0	60.0

Results Applicable To Those Items Tested. Report Cannot be Reproduced, Except Entirely, Without Written Approval of the Laboratory. Liability Limited To Cost Of Analysis. This Report Must Not be Used by the Client to Claim Product Endorsement by NVLAP or Any Agency of the US Government. These Results Can Not Be Used To Claim That NOB Items Tested Are Non-Asbestos Containing. Overall Lab Accuracy ± 17%. Samples received in acceptable condition unless otherwise noted.

AIHA Accreditation No. 100263 Rhode Island DOH No. AAL-072 Massachusetts DOL No. A A 000072 Connecticut DOH No. PH-0622 Maine DEP No. LA-024 Vermont DOH No.

Eastern Analytical Services, Inc. **Chain of Custody Form**

EAS Client:

Tighe & Bond

% Asb

53 Southampton Road Westfield, MA 01085

Shipped Via:

1906972

Turn-Around:

EAS Batch No.

12 Hr

Walk In

State of Origin:

CT

Sample Disposition:

Standard x Return

Analyte:

No. of Samples 8

Received:

No. of Samples 8 Analyzed:

Client Project

RE: CPN 150439020 - Burroughs Park

Number/Name:

Logged Out By:

Lab ID Numbers: 2639691-2639693;2639694-2639698

Collected By:	Brian Sirowich	Signature	Date: 08/23/2019	
Received By:	Damien Warner Ghayath Elias	The Manney of the second	Date: 08/23/2019	Time: 1329
Logged In By:	Ghayath Elias		Date: 08/23/2019	
Prepped By:	Ghayath Elias		Date: 08/23/2019	
Analyzed By :	Ghayath Elias	J. J. Commission of the Commis	Date: 08/23/2019	Time: 1715
Re-Analyzed By:	Ghayath Elias	J. C.	Date: 08/23/2019	
Checked By:	Damien Warner	25 M	Date: 08/23/2019	
E-Transmitted By:	Damien Warner	25. W.	Date: 08/23/2019	Time: 2036

Date:

Eastern Analytical Services, Inc.

4 Westchester Plaza - Elmsford, NY 10523

www.EASInc.coi 2639691 BP \$1 914-592-8380 2639692 **BP**

S2 2639693 BP 53

BP 57 2639696 BP 38²⁶³⁹⁶⁹⁷

CHAIN OF CUST 2639694 2639695 BP 56 Tighe 4 EAS Client: No. of Samples: Southamption □03Hr □06Hr **□**12Hr □24Hr □30Hr Turn-Westfield CT 01085 □48Hr □72Hr □96Hr □5Day □Other Around Analyte: Asbestos Lead Fungi Walk In ☑ PLM Spore Trap US Mail □ Solid Shipped □ NOB PLM Only □ Dust Tape Lift Via: ☐ FedEx US Exp □ NOB TEM Only □ Air □ UPS ☐ Courier □ NOB PLM/TEM □ Water Other Drop Box Other □ NOB TEM/PLM □ Other Analyte ECT DIN DPA DMA ☐ Air 7400 (PCM) State of ☐ Air AHERA (TEM) Origin: ☐ RI ☐ ME ☐ VT ☐ Other **TCLP** ☐ Air 7402 (тем) ☐ Water (TEM) Pb Only Sample ■8 RCRA Other Disposition (Std.) (Return) Client Project 150439020 -> Burroughs Name/Number: Sirowich Brian Sampled By: Name (Print or Type) Signature 8/23/19 Fan Adomeit Submitted By: Name (Print or Type) Signature itolsm@tighebond.com bs rowich & tighebond. com Comments: JLLibby@ tighebond.com FOR LABORATORY USE ONLY Account Number: Received By: MADNE Name (Print) Signature Time Date Logged-In By: Prepped By: Analyzed By: Re-Analyzed By: Checked By: Logged-Out By:



Non-Friable Organically Bound (NOB) Materials - This term refers to a wide variety of building materials, such as vinyl or asphalt floor tile, resilient floor covering, mastic, asphalt shingle, roofing material, caulk, putty, etc., Polarized Light Microscopy (PLM) analysis has limitations when NOB materials are encountered. These limitations, such as the inability to detect thin or extremely short fibers (less than 1 micrometer in length) generated during the milling process and/or the difficulty of separating asbestos fibers and bundles from the resinous matrix, may lead to false negatives or underestimates of the amount of asbestos fibers present in the sample. Recently, NYS DOH added Ceiling Tiles with Cellulose to the list of materials to be analyzed via the NOB methods. For these reasons, when analysis by PLM yields negative results for the presence of asbestos in NOB materials. The State of New York Department of Health (DOH) has issued the following requirements as of April 8, 2011: NOBs and ceiling tiles with cellulose must be analyzed by both of the gravimetric matrix reduction methods (ELAP Item 198.6 and 198.4) to be deemed negative for asbestos.

EAS is approved by the NYS-DOH to perform analysis of NOB materials via Transmission Electron Microscopy (ELAP Item 1984). The superior resolution of Transmission Electron Microscopy can detect the presence of asbestos fibers well beyond the range of PLM. In addition, the use of selected-area electron diffraction (SAED) and energy-dispersive spectroscopy (EDS) can positively identify asbestos fibers in the sample. NOB samples determined to contain less than 1% asbestos via the TEM method, must also be analyzed via PLM (198.6) to verify the absence of large amphibole fibers which may not have been successfully transferred to the EM Grids.

The State of New Jersey recently adopted amendments to their regulations requiring gravimetric reduction followed by PLM and TEM analysis for NOB building materials. The regulations can be found at http://lwd.doi.state.nj.us/labor/isse/laws/Asbestos_law.html#5a39.

Recently (April 3, 2011). Maine DEP revised their regulations to require gravimetric reduction of NOBs https://www1.maine.gov/dep/waste/asbestos/documents/asbbulksampanalysisprotocolsformYenabled.pdf

Vermiculite - As of July 9, 2013, NYS has issued new guidance on Vermiculite loose bulk materials and insulation materials which contain Vermiculite. The following quotes have been taken from their guidance letter: "If material is attic fill, block fill or other loose bulk vermiculite materials, it must be designated and treated as ACM. No approved analytical method currently exists to reliably confirm such vermiculite material as non-ACM." "Where thermal systems insulation (TSI), *, or other presumed ACM (PACM) or miscellaneous suspect ACM contain 10% vermiculite or less, certified laboratories may use ELAP Certification Manual Item 198.1 to determine the asbestos content of the material. Where TSL, * or other PACM or miscellaneous suspect ACM contain greater than 10% vermiculite, Item 198.6 may be used to evaluate the asbestos content of the material, provided, however, that any test results using this method must be reported with the following conspicuous disclaimer:

> "This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite."

See the EPA website at https://www.epa.gov/asbestos/protect-your-family-asbestos-contaminated-vermiculite-insulation

* Surfacing Material Containing Vermiculite - As of May 6, 2016, NYS has issued new guidance regarding Surfacing Material containing vermiculity (essentially expanding the previous requirements for spray-on fireproofing to apply to all surfacing materials). If a surfacing material contains any vermiculite, it must be analyzed via NYS-DOH Method 198.8 (or RJ Lee Group Method 055) to be deemed negative for asbestos.

Surface Wipe Samples - Due to the fact that a large percentage of asbestos fibers released from deteriorating asbestos-containing materials or from improperly performed abatement activities are on the order of 5 micrometers or less and are near or below the resolution of a Polarized Light Microscope, Eastern Analytical Services, Inc. recommends that negative surface wipe samples be confirmed utilizing Transmission Electron Microscopy.

Point Counting - New York State Department of Health regulations require quantification of asbestos via the "Stratified Point Count" Method for all bulk samples originating from New York State. Please indicate the state of origin on the Chain of Custody form for all samples submitted to the laboratory. There is no additional charge for quantification using this method.

Layered Samples - NESHAP policy regarding layered bulk samples has changed. In the past, laboratories were required to analyze individual layers of multi-layered bulk samples separately, but report the results in terms of quantity of asbestos for the composite sample. This policy change requires that the layers be analyzed separately and reported as such. Additionally, materials are to be characterized as asbestos or non-asbestos based on the results of the individual layers.

As a result of this policy, EAS will be reporting the results of the individual layers of multi-layered bulk samples submitted for asbestos analysis UNLESS COMPOSITE RESULTS ARE SPECIFICALLY REQUESTED BY THE CLIENT. Additional layers for all bulk samples will be billed as separate samples.

If you have any questions concerning the above, please feel free to contact EAS.



Eastern Analytical Services, Inc.

Phone (914) 592-8380

4 Westchester Plaza Elmsford, New York 10523-1610 Federal ID #11-2753797 Fax (914) 592-8956

CLIENT

Tighe & Bond

53 Southampton Road Westfield, MA 01085

INVOICE Nº 1024034

DATE

08/26/2019

P.O. NUMBER

TERMS

1%/10, Net 30,

1.5% Int 30+

Account No. 040136

EAS Batch No. 1906972

DATE	DESCRIPTION		PRICE
3/23/2019	Analytical Services (12 Hr Turn-Around)		
	RE: CPN 150439020 - Burroughs Park		
	Fiber Identification Polarized Light Microscopy		
	8 Samples @ \$13.00 /Sample		\$104.00
		Total	\$104.00
		rotai	Ψ101.00
	Please Reference Invoice Number with Payment		