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QA/QC Report

August 09, 2018

QA/QC Data

SDG I.D.: GCA98174

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 440478 (mg/Kg), QC Sample No: CA97861 (CA98174, CA98175, CA98176, CA98177, CA98178, CA98179, CA98180, CA98181, CA98182, CA98183, CA98185)											
TPH by GC (Extractable Products) - Soil											
Ext. Petroleum H.C. (C9-C36)	ND	50	95	97	2.1	104	90	14.4	60 - 120	30	
% n-Pentacosane	74	%	82	87	5.9	76	70	8.2	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 440480 (ug/kg), QC Sample No: CA98063 (CA98175, CA98176, CA98177, CA98178, CA98179, CA98180, CA98181, CA98182, CA98183, CA98185)											
Polynuclear Aromatic HC - Soil											
2-Methylnaphthalene	ND	230	64	68	6.1	52	53	1.9	30 - 130	30	
Acenaphthene	ND	230	66	71	7.3	59	57	3.4	30 - 130	30	
Acenaphthylene	ND	230	65	67	3.0	57	56	1.8	30 - 130	30	
Anthracene	ND	230	70	73	4.2	60	58	3.4	30 - 130	30	
Benz(a)anthracene	ND	230	72	74	2.7	58	55	5.3	30 - 130	30	
Benzo(a)pyrene	ND	230	69	70	1.4	52	52	0.0	30 - 130	30	
Benzo(b)fluoranthene	ND	230	75	76	1.3	56	54	3.6	30 - 130	30	
Benzo(ghi)perylene	ND	230	67	69	2.9	27	41	41.2	30 - 130	30	m,r
Benzo(k)fluoranthene	ND	230	71	72	1.4	57	55	3.6	30 - 130	30	
Chrysene	ND	230	70	75	6.9	57	53	7.3	30 - 130	30	
Dibenz(a,h)anthracene	ND	230	70	72	2.8	35	48	31.3	30 - 130	30	r
Fluoranthene	ND	230	70	73	4.2	59	55	7.0	30 - 130	30	
Fluorene	ND	230	57	70	20.5	60	58	3.4	30 - 130	30	
Indeno(1,2,3-cd)pyrene	ND	230	74	75	1.3	31	44	34.7	30 - 130	30	r
Naphthalene	ND	230	65	64	1.6	55	57	3.6	30 - 130	30	
Phenanthrene	ND	230	69	70	1.4	59	55	7.0	30 - 130	30	
Pyrene	ND	230	70	74	5.6	61	59	3.3	30 - 130	30	
% 2-Fluorobiphenyl	70	%	72	70	2.8	57	57	0.0	30 - 130	30	
% Nitrobenzene-d5	70	%	66	68	3.0	56	54	3.6	30 - 130	30	
% Terphenyl-d14	64	%	68	73	7.1	58	60	3.4	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%)											
QA/QC Batch 440692 (ug/kg), QC Sample No: CA98497 (CA98174, CA98176, CA98177, CA98179, CA98180, CA98182, CA98183)											
Volatiles - Soil											
1,1,1,2-Tetrachloroethane	ND	5.0	105	107	1.9	102	104	1.9	70 - 130	30	
1,1,1-Trichloroethane	ND	5.0	104	103	1.0	99	99	0.0	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	3.0	106	104	1.9	96	99	3.1	70 - 130	30	
1,1,2-Trichloroethane	ND	5.0	97	98	1.0	96	97	1.0	70 - 130	30	
1,1-Dichloroethane	ND	5.0	102	102	0.0	101	100	1.0	70 - 130	30	
1,1-Dichloroethene	ND	5.0	103	102	1.0	83	94	12.4	70 - 130	30	
1,1-Dichloropropene	ND	5.0	102	102	0.0	101	100	1.0	70 - 130	30	

QA/QC Data

SDG I.D.: GCA98174

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,2,3-Trichlorobenzene	ND	5.0	102	101	1.0	95	102	7.1	70 - 130	30	
1,2,3-Trichloropropane	ND	5.0	101	101	0.0	95	97	2.1	70 - 130	30	
1,2,4-Trichlorobenzene	ND	5.0	103	100	3.0	96	103	7.0	70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	101	100	1.0	96	99	3.1	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	115	113	1.8	95	100	5.1	70 - 130	30	
1,2-Dibromoethane	ND	5.0	102	102	0.0	98	100	2.0	70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	99	99	0.0	96	99	3.1	70 - 130	30	
1,2-Dichloroethane	ND	5.0	98	99	1.0	96	96	0.0	70 - 130	30	
1,2-Dichloropropane	ND	5.0	98	99	1.0	98	98	0.0	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	103	102	1.0	98	101	3.0	70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	102	100	2.0	96	101	5.1	70 - 130	30	
1,3-Dichloropropane	ND	5.0	99	99	0.0	96	96	0.0	70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	100	99	1.0	95	99	4.1	70 - 130	30	
2,2-Dichloropropane	ND	5.0	112	109	2.7	106	107	0.9	70 - 130	30	
2-Chlorotoluene	ND	5.0	100	100	0.0	95	98	3.1	70 - 130	30	
2-Hexanone	ND	25	95	93	2.1	81	83	2.4	70 - 130	30	
2-Isopropyltoluene	ND	5.0	106	105	0.9	102	104	1.9	70 - 130	30	
4-Chlorotoluene	ND	5.0	101	100	1.0	96	99	3.1	70 - 130	30	
4-Methyl-2-pentanone	ND	25	97	94	3.1	88	89	1.1	70 - 130	30	
Acetone	ND	10	89	87	2.3	66	67	1.5	70 - 130	30	m
Acrylonitrile	ND	5.0	106	104	1.9	98	98	0.0	70 - 130	30	
Benzene	ND	1.0	99	99	0.0	98	97	1.0	70 - 130	30	
Bromobenzene	ND	5.0	102	101	1.0	97	99	2.0	70 - 130	30	
Bromochloromethane	ND	5.0	102	102	0.0	99	100	1.0	70 - 130	30	
Bromodichloromethane	ND	5.0	104	105	1.0	99	99	0.0	70 - 130	30	
Bromoform	ND	5.0	116	117	0.9	100	105	4.9	70 - 130	30	
Bromomethane	ND	5.0	101	102	1.0	59	56	5.2	70 - 130	30	m
Carbon Disulfide	ND	5.0	117	116	0.9	87	84	3.5	70 - 130	30	
Carbon tetrachloride	ND	5.0	105	104	1.0	97	100	3.0	70 - 130	30	
Chlorobenzene	ND	5.0	100	99	1.0	99	99	0.0	70 - 130	30	
Chloroethane	ND	5.0	98	94	4.2	98	102	4.0	70 - 130	30	
Chloroform	ND	5.0	101	101	0.0	99	99	0.0	70 - 130	30	
Chloromethane	ND	5.0	94	91	3.2	89	89	0.0	70 - 130	30	
cis-1,2-Dichloroethene	ND	5.0	103	104	1.0	101	100	1.0	70 - 130	30	
cis-1,3-Dichloropropene	ND	5.0	104	103	1.0	100	100	0.0	70 - 130	30	
Dibromochloromethane	ND	3.0	115	116	0.9	105	108	2.8	70 - 130	30	
Dibromomethane	ND	5.0	98	98	0.0	96	96	0.0	70 - 130	30	
Dichlorodifluoromethane	ND	5.0	96	95	1.0	89	90	1.1	70 - 130	30	
Ethylbenzene	ND	1.0	101	101	0.0	100	100	0.0	70 - 130	30	
Hexachlorobutadiene	ND	5.0	107	104	2.8	103	108	4.7	70 - 130	30	
Isopropylbenzene	ND	1.0	101	100	1.0	95	97	2.1	70 - 130	30	
m&p-Xylene	ND	2.0	101	101	0.0	99	100	1.0	70 - 130	30	
Methyl ethyl ketone	ND	5.0	91	89	2.2	82	82	0.0	70 - 130	30	
Methyl t-butyl ether (MTBE)	ND	1.0	98	98	0.0	90	87	3.4	70 - 130	30	
Methylene chloride	ND	5.0	89	90	1.1	85	82	3.6	70 - 130	30	
Naphthalene	ND	5.0	103	103	0.0	92	100	8.3	70 - 130	30	
n-Butylbenzene	ND	1.0	105	103	1.9	99	103	4.0	70 - 130	30	
n-Propylbenzene	ND	1.0	102	102	0.0	97	99	2.0	70 - 130	30	
o-Xylene	ND	2.0	99	99	0.0	98	99	1.0	70 - 130	30	
p-Isopropyltoluene	ND	1.0	105	103	1.9	100	103	3.0	70 - 130	30	
sec-Butylbenzene	ND	1.0	107	106	0.9	102	104	1.9	70 - 130	30	
Styrene	ND	5.0	102	104	1.9	101	103	2.0	70 - 130	30	
tert-Butylbenzene	ND	1.0	101	101	0.0	97	99	2.0	70 - 130	30	

QA/QC Data

SDG I.D.: GCA98174

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Tetrachloroethene	ND	5.0	100	99	1.0	99	101	2.0	70 - 130	30	
Tetrahydrofuran (THF)	ND	5.0	100	96	4.1	91	93	2.2	70 - 130	30	
Toluene	ND	1.0	99	99	0.0	98	99	1.0	70 - 130	30	
trans-1,2-Dichloroethene	ND	5.0	105	106	0.9	99	95	4.1	70 - 130	30	
trans-1,3-Dichloropropene	ND	5.0	102	102	0.0	97	98	1.0	70 - 130	30	
trans-1,4-dichloro-2-butene	ND	5.0	121	118	2.5	99	104	4.9	70 - 130	30	
Trichloroethene	ND	5.0	103	103	0.0	101	102	1.0	70 - 130	30	
Trichlorofluoromethane	ND	5.0	97	96	1.0	96	94	2.1	70 - 130	30	
Trichlorotrifluoroethane	ND	5.0	105	105	0.0	90	87	3.4	70 - 130	30	
Vinyl chloride	ND	5.0	102	99	3.0	100	100	0.0	70 - 130	30	
% 1,2-dichlorobenzene-d4	99	%	101	100	1.0	100	101	1.0	70 - 130	30	
% Bromofluorobenzene	97	%	99	100	1.0	100	100	0.0	70 - 130	30	
% Dibromofluoromethane	97	%	101	102	1.0	100	100	0.0	70 - 130	30	
% Toluene-d8	98	%	99	99	0.0	100	99	1.0	70 - 130	30	

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 440548 (ug/kg), QC Sample No: CA98577 (CA98174)

Semivolatiles - Soil

1,2,4,5-Tetrachlorobenzene	ND	230	56	49	13.3	59	56	5.2	30 - 130	30	
1,2,4-Trichlorobenzene	ND	230	54	49	9.7	59	58	1.7	30 - 130	30	
1,2-Dichlorobenzene	ND	180	44	40	9.5	49	49	0.0	30 - 130	30	
1,2-Diphenylhydrazine	ND	230	55	48	13.6	59	56	5.2	30 - 130	30	
1,3-Dichlorobenzene	ND	230	46	39	16.5	48	47	2.1	30 - 130	30	
1,4-Dichlorobenzene	ND	230	47	42	11.2	51	50	2.0	30 - 130	30	
2,4,5-Trichlorophenol	ND	230	67	56	17.9	68	62	9.2	30 - 130	30	
2,4,6-Trichlorophenol	ND	130	66	55	18.2	67	63	6.2	30 - 130	30	
2,4-Dichlorophenol	ND	130	60	54	10.5	63	60	4.9	30 - 130	30	
2,4-Dimethylphenol	ND	230	65	57	13.1	51	48	6.1	30 - 130	30	
2,4-Dinitrophenol	ND	230	15	11	30.8	63	48	27.0	30 - 130	30	I,r
2,4-Dinitrotoluene	ND	130	66	58	12.9	65	61	6.3	30 - 130	30	
2,6-Dinitrotoluene	ND	130	70	58	18.8	67	65	3.0	30 - 130	30	
2-Chloronaphthalene	ND	230	57	49	15.1	59	57	3.4	30 - 130	30	
2-Chlorophenol	ND	230	54	47	13.9	58	56	3.5	30 - 130	30	
2-Methylnaphthalene	ND	230	56	50	11.3	61	58	5.0	30 - 130	30	
2-Methylphenol (o-cresol)	ND	230	60	51	16.2	60	61	1.7	30 - 130	30	
2-Nitroaniline	ND	330	76	66	14.1	81	72	11.8	30 - 130	30	
2-Nitrophenol	ND	230	51	45	12.5	56	57	1.8	30 - 130	30	
3&4-Methylphenol (m&p-cresol)	ND	230	61	54	12.2	63	62	1.6	30 - 130	30	
3,3'-Dichlorobenzidine	ND	130	67	57	16.1	67	58	14.4	30 - 130	30	
3-Nitroaniline	ND	330	74	65	12.9	71	68	4.3	30 - 130	30	
4,6-Dinitro-2-methylphenol	ND	230	32	29	9.8	65	52	22.2	30 - 130	30	I
4-Bromophenyl phenyl ether	ND	230	62	54	13.8	62	57	8.4	30 - 130	30	
4-Chloro-3-methylphenol	ND	230	69	61	12.3	72	67	7.2	30 - 130	30	
4-Chloroaniline	ND	230	62	54	13.8	61	59	3.3	30 - 130	30	
4-Chlorophenyl phenyl ether	ND	230	65	54	18.5	65	61	6.3	30 - 130	30	
4-Nitroaniline	ND	230	65	55	16.7	67	65	3.0	30 - 130	30	
4-Nitrophenol	ND	230	74	60	20.9	74	69	7.0	30 - 130	30	
Acenaphthene	ND	230	62	52	17.5	63	62	1.6	30 - 130	30	
Acenaphthylene	ND	130	58	49	16.8	58	57	1.7	30 - 130	30	
Acetophenone	ND	230	50	43	15.1	54	54	0.0	30 - 130	30	
Aniline	ND	330	44	37	17.3	44	40	9.5	30 - 130	30	
Anthracene	ND	230	63	54	15.4	62	65	4.7	30 - 130	30	

QA/QC Data

SDG I.D.: GCA98174

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benz(a)anthracene	ND	230	63	56	11.8	66	68	3.0	30 - 130	30	
Benzidine	ND	330	48	35	31.3	<10	<10	NC	30 - 130	30	m,r
Benzo(a)pyrene	ND	130	61	54	12.2	61	63	3.2	30 - 130	30	
Benzo(b)fluoranthene	ND	160	64	57	11.6	65	67	3.0	30 - 130	30	
Benzo(ghi)perylene	ND	230	53	46	14.1	53	49	7.8	30 - 130	30	
Benzo(k)fluoranthene	ND	230	67	57	16.1	69	68	1.5	30 - 130	30	
Benzoic Acid	ND	330	<10	<10	NC	59	45	26.9	30 - 130	30	l
Benzyl butyl phthalate	ND	230	72	62	14.9	74	71	4.1	30 - 130	30	
Bis(2-chloroethoxy)methane	ND	230	59	53	10.7	66	62	6.3	30 - 130	30	
Bis(2-chloroethyl)ether	ND	130	48	44	8.7	48	52	8.0	30 - 130	30	
Bis(2-chloroisopropyl)ether	ND	230	47	40	16.1	49	50	2.0	30 - 130	30	
Bis(2-ethylhexyl)phthalate	ND	230	69	58	17.3	67	75	11.3	30 - 130	30	
Carbazole	ND	230	65	57	13.1	65	64	1.6	30 - 130	30	
Chrysene	ND	230	61	54	12.2	64	68	6.1	30 - 130	30	
Dibenz(a,h)anthracene	ND	130	60	52	14.3	65	57	13.1	30 - 130	30	
Dibenzofuran	ND	230	62	52	17.5	63	61	3.2	30 - 130	30	
Diethyl phthalate	ND	230	65	56	14.9	65	61	6.3	30 - 130	30	
Dimethylphthalate	ND	230	62	52	17.5	61	57	6.8	30 - 130	30	
Di-n-butylphthalate	ND	670	68	59	14.2	68	65	4.5	30 - 130	30	
Di-n-octylphthalate	ND	230	73	64	13.1	76	71	6.8	30 - 130	30	
Fluoranthene	ND	230	63	55	13.6	63	79	22.5	30 - 130	30	
Fluorene	ND	230	63	54	15.4	64	62	3.2	30 - 130	30	
Hexachlorobenzene	ND	130	63	56	11.8	62	61	1.6	30 - 130	30	
Hexachlorobutadiene	ND	230	55	50	9.5	58	56	3.5	30 - 130	30	
Hexachlorocyclopentadiene	ND	230	53	45	16.3	53	50	5.8	30 - 130	30	
Hexachloroethane	ND	130	45	39	14.3	48	46	4.3	30 - 130	30	
Indeno(1,2,3-cd)pyrene	ND	230	58	51	12.8	59	57	3.4	30 - 130	30	
Isophorone	ND	130	55	49	11.5	58	57	1.7	30 - 130	30	
Naphthalene	ND	230	54	50	7.7	61	59	3.3	30 - 130	30	
Nitrobenzene	ND	130	53	47	12.0	60	59	1.7	30 - 130	30	
N-Nitrosodimethylamine	ND	230	37	32	14.5	42	38	10.0	30 - 130	30	
N-Nitrosodi-n-propylamine	ND	130	60	53	12.4	67	63	6.2	30 - 130	30	
N-Nitrosodiphenylamine	ND	130	62	53	15.7	57	54	5.4	30 - 130	30	
Pentachloronitrobenzene	ND	230	63	54	15.4	59	61	3.3	30 - 130	30	
Pentachlorophenol	ND	230	52	46	12.2	71	67	5.8	30 - 130	30	
Phenanthrene	ND	130	62	54	13.8	64	87	30.5	30 - 130	30	
Phenol	ND	230	63	55	13.6	66	67	1.5	30 - 130	30	
Pyrene	ND	230	63	57	10.0	68	80	16.2	30 - 130	30	
Pyridine	ND	230	26	23	12.2	32	28	13.3	30 - 130	30	l,m
% 2,4,6-Tribromophenol	60	%	62	49	23.4	62	63	1.6	30 - 130	30	
% 2-Fluorobiphenyl	64	%	59	45	26.9	61	58	5.0	30 - 130	30	
% 2-Fluorophenol	50	%	50	38	27.3	52	48	8.0	30 - 130	30	
% Nitrobenzene-d5	55	%	51	40	24.2	56	57	1.8	30 - 130	30	
% Phenol-d5	57	%	57	43	28.0	62	58	6.7	30 - 130	30	
% Terphenyl-d14	66	%	63	49	25.0	62	57	8.4	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%)

QA/QC Batch 440854 (ug/kg), QC Sample No: CA98838 (CA98185 (100X))

Volatiles - Soil

1,1,1,2-Tetrachloroethane	ND	5.0	107	108	0.9	110	109	0.9	70 - 130	30	
1,1,1-Trichloroethane	ND	5.0	105	104	1.0	110	108	1.8	70 - 130	30	

QA/QC Data

SDG I.D.: GCA98174

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,1,2,2-Tetrachloroethane	ND	3.0	106	106	0.0	114	115	0.9	70 - 130	30	
1,1,2-Trichloroethane	ND	5.0	100	100	0.0	100	98	2.0	70 - 130	30	
1,1-Dichloroethane	ND	5.0	107	105	1.9	109	109	0.0	70 - 130	30	
1,1-Dichloroethene	ND	5.0	98	100	2.0	104	103	1.0	70 - 130	30	
1,1-Dichloropropene	ND	5.0	104	105	1.0	108	105	2.8	70 - 130	30	
1,2,3-Trichlorobenzene	ND	5.0	104	102	1.9	107	107	0.0	70 - 130	30	
1,2,3-Trichloropropane	ND	5.0	99	101	2.0	113	116	2.6	70 - 130	30	
1,2,4-Trichlorobenzene	ND	5.0	106	105	0.9	108	107	0.9	70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	102	102	0.0	102	95	7.1	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	109	111	1.8	107	114	6.3	70 - 130	30	
1,2-Dibromoethane	ND	5.0	104	103	1.0	102	102	0.0	70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	100	100	0.0	89	85	4.6	70 - 130	30	
1,2-Dichloroethane	ND	5.0	100	100	0.0	99	99	0.0	70 - 130	30	
1,2-Dichloropropane	ND	5.0	102	102	0.0	105	103	1.9	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	103	103	0.0	107	100	6.8	70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	103	102	1.0	94	88	6.6	70 - 130	30	
1,3-Dichloropropane	ND	5.0	102	100	2.0	103	102	1.0	70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	102	102	0.0	92	87	5.6	70 - 130	30	
2,2-Dichloropropane	ND	5.0	112	107	4.6	109	107	1.9	70 - 130	30	
2-Chlorotoluene	ND	5.0	100	101	1.0	106	101	4.8	70 - 130	30	
2-Hexanone	ND	25	93	93	0.0	88	84	4.7	70 - 130	30	
2-Isopropyltoluene	ND	5.0	106	105	0.9	105	95	10.0	70 - 130	30	
4-Chlorotoluene	ND	5.0	103	102	1.0	103	99	4.0	70 - 130	30	
4-Methyl-2-pentanone	ND	25	98	99	1.0	95	65	37.5	70 - 130	30	m,r
Acetone	ND	10	79	83	4.9	68	68	0.0	70 - 130	30	m
Acrylonitrile	ND	5.0	107	107	0.0	105	73	36.0	70 - 130	30	r
Benzene	ND	1.0	102	101	1.0	105	104	1.0	70 - 130	30	
Bromobenzene	ND	5.0	102	102	0.0	105	102	2.9	70 - 130	30	
Bromochloromethane	ND	5.0	105	103	1.9	106	105	0.9	70 - 130	30	
Bromodichloromethane	ND	5.0	107	106	0.9	107	109	1.9	70 - 130	30	
Bromoform	ND	5.0	115	116	0.9	107	112	4.6	70 - 130	30	
Bromomethane	ND	5.0	99	101	2.0	102	96	6.1	70 - 130	30	
Carbon Disulfide	ND	5.0	111	115	3.5	110	109	0.9	70 - 130	30	
Carbon tetrachloride	ND	5.0	108	107	0.9	110	110	0.0	70 - 130	30	
Chlorobenzene	ND	5.0	102	102	0.0	100	98	2.0	70 - 130	30	
Chloroethane	ND	5.0	92	94	2.2	108	104	3.8	70 - 130	30	
Chloroform	ND	5.0	104	104	0.0	107	106	0.9	70 - 130	30	
Chloromethane	ND	5.0	96	96	0.0	95	96	1.0	70 - 130	30	
cis-1,2-Dichloroethene	ND	5.0	105	104	1.0	107	106	0.9	70 - 130	30	
cis-1,3-Dichloropropene	ND	5.0	106	106	0.0	99	96	3.1	70 - 130	30	
Dibromochloromethane	ND	3.0	118	117	0.9	116	121	4.2	70 - 130	30	
Dibromomethane	ND	5.0	101	101	0.0	101	101	0.0	70 - 130	30	
Dichlorodifluoromethane	ND	5.0	102	101	1.0	105	104	1.0	70 - 130	30	
Ethylbenzene	ND	1.0	102	103	1.0	105	101	3.9	70 - 130	30	
Hexachlorobutadiene	ND	5.0	107	104	2.8	110	112	1.8	70 - 130	30	
Isopropylbenzene	ND	1.0	101	101	0.0	113	107	5.5	70 - 130	30	
m&p-Xylene	ND	2.0	103	102	1.0	102	98	4.0	70 - 130	30	
Methyl ethyl ketone	ND	5.0	91	92	1.1	89	82	8.2	70 - 130	30	
Methyl t-butyl ether (MTBE)	ND	1.0	86	89	3.4	86	87	1.2	70 - 130	30	
Methylene chloride	ND	5.0	86	88	2.3	87	88	1.1	70 - 130	30	
Naphthalene	ND	5.0	103	102	1.0	105	103	1.9	70 - 130	30	
n-Butylbenzene	ND	1.0	107	106	0.9	91	78	15.4	70 - 130	30	
n-Propylbenzene	ND	1.0	103	102	1.0	110	101	8.5	70 - 130	30	

QA/QC Data

SDG I.D.: GCA98174

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
o-Xylene	ND	2.0	101	100	1.0	101	97	4.0	70 - 130	30
p-Isopropyltoluene	ND	1.0	105	104	1.0	99	88	11.8	70 - 130	30
sec-Butylbenzene	ND	1.0	107	106	0.9	105	93	12.1	70 - 130	30
Styrene	ND	5.0	105	104	1.0	89	86	3.4	70 - 130	30
tert-Butylbenzene	ND	1.0	101	101	0.0	106	97	8.9	70 - 130	30
Tetrachloroethene	ND	5.0	102	102	0.0	106	99	6.8	70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	101	101	0.0	97	98	1.0	70 - 130	30
Toluene	ND	1.0	101	101	0.0	104	100	3.9	70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	99	103	4.0	103	102	1.0	70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	104	104	0.0	95	94	1.1	70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	124	123	0.8	105	105	0.0	70 - 130	30
Trichloroethene	ND	5.0	105	104	1.0	108	106	1.9	70 - 130	30
Trichlorofluoromethane	ND	5.0	99	100	1.0	109	108	0.9	70 - 130	30
Trichlorotrifluoroethane	ND	5.0	102	103	1.0	107	104	2.8	70 - 130	30
Vinyl chloride	ND	5.0	103	104	1.0	106	107	0.9	70 - 130	30
% 1,2-dichlorobenzene-d4	100	%	101	100	1.0	98	99	1.0	70 - 130	30
% Bromofluorobenzene	98	%	100	98	2.0	94	94	0.0	70 - 130	30
% Dibromofluoromethane	97	%	101	101	0.0	100	101	1.0	70 - 130	30
% Toluene-d8	97	%	99	99	0.0	99	98	1.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 440858 (ug/kg), QC Sample No: CA99053 (CA98176 (50X) , CA98183 (50X))

Volatiles - Soil

1,1,2,2-Tetrachloroethane	ND	3.0	103	104	1.0	101	107	5.8	70 - 130	30
1,2,3-Trichlorobenzene	ND	5.0	104	105	1.0	88	99	11.8	70 - 130	30
1,2,3-Trichloropropane	ND	5.0	103	105	1.9	105	111	5.6	70 - 130	30
1,2,4-Trichlorobenzene	ND	5.0	107	108	0.9	90	98	8.5	70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	100	100	0.0	81	90	10.5	70 - 130	30
1,2-Dichlorobenzene	ND	5.0	99	100	1.0	88	76	14.6	70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	101	102	1.0	84	93	10.2	70 - 130	30
1,3-Dichlorobenzene	ND	5.0	101	101	0.0	71	80	11.9	70 - 130	30
1,4-Dichlorobenzene	ND	5.0	100	101	1.0	71	79	10.7	70 - 130	30
2-Chlorotoluene	ND	5.0	99	99	0.0	84	94	11.2	70 - 130	30
2-Isopropyltoluene	ND	5.0	103	104	1.0	80	91	12.9	70 - 130	30
4-Chlorotoluene	ND	5.0	101	101	0.0	82	92	11.5	70 - 130	30
Bromobenzene	ND	5.0	100	101	1.0	88	96	8.7	70 - 130	30
Hexachlorobutadiene	ND	5.0	104	106	1.9	94	101	7.2	70 - 130	30
Isopropylbenzene	ND	1.0	99	99	0.0	91	100	9.4	70 - 130	30
Naphthalene	ND	5.0	101	103	2.0	84	98	15.4	70 - 130	30
n-Butylbenzene	ND	1.0	105	105	0.0	91	73	22.0	70 - 130	30
n-Propylbenzene	ND	1.0	101	100	1.0	85	96	12.2	70 - 130	30
p-Isopropyltoluene	ND	1.0	103	103	0.0	73	83	12.8	70 - 130	30
sec-Butylbenzene	ND	1.0	104	104	0.0	77	88	13.3	70 - 130	30
tert-Butylbenzene	ND	1.0	99	98	1.0	83	93	11.4	70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	117	119	1.7	103	109	5.7	70 - 130	30
% 1,2-dichlorobenzene-d4	100	%	101	100	1.0	98	98	0.0	70 - 130	30
% Bromofluorobenzene	98	%	99	99	0.0	93	92	1.1	70 - 130	30

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Data

SDG I.D.: GCA98174

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 441930 (ug/Kg), QC Sample No: CB04688 2X (CA98177, CA98180)										
Polychlorinated Biphenyls - Soil										
PCB-1016	ND	33	77	88	13.3	61	56	8.5	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	86	106	20.8	92	89	3.3	40 - 140	30
PCB-1262	ND	33							40 - 140	30
PCB-1268	ND	33							40 - 140	30
% DCBP (Surrogate Rec)	101	%	107	111	3.7	100	96	4.1	30 - 150	30
% TCMX (Surrogate Rec)	94	%	91	103	12.4	76	67	12.6	30 - 150	30

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
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
August 09, 2018

Thursday, August 09, 2018

Criteria: CT: GBM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCA98174 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CA98174	$8270-SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	3000	300	1000	1000	ug/Kg
CA98174	$8270-SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	1700	300	1000	1000	ug/Kg
CA98174	$8270-SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	3000	300	1000	1000	ug/Kg
CA98174	$8270-SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	2600	300	1000	1000	ug/Kg
CA98174	$8270-SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	2900	300	1000	1000	ug/Kg
CA98174	$8270-SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	1400	300	1000	1000	ug/Kg
CA98174	$8270-SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	1700	300	1000	1000	ug/Kg
CA98174	$8270-SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	2900	300	1000	1000	ug/Kg
CA98174	$8270-SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	2600	300	1000	1000	ug/Kg
CA98174	$8270-SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	3000	300	1000	1000	ug/Kg
CA98174	$8270-SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	2900	300	1000	1000	ug/Kg
CA98174	$8270-SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	2500	300	1000	1000	ug/Kg
CA98174	AS-SM	Arsenic	CT / RSR DEC I/C (mg/kg) / Inorganics	48.5	0.89	10	10	mg/Kg
CA98174	AS-SM	Arsenic	CT / RSR DEC RES (mg/kg) / Inorganics	48.5	0.89	10	10	mg/Kg
CA98175	$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC I/C (mg/kg) / APS Organics	4900	250	1000	1000	ug/Kg
CA98175	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC I/C (mg/kg) / APS Organics	16000	1000	7800	7800	ug/Kg
CA98175	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	23000	1000	7800	7800	ug/Kg
CA98175	$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	24000	1000	1000	1000	ug/Kg
CA98175	$8100SMR	Benz(a)anthracene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	35000	1000	7800	7800	ug/Kg
CA98175	$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC RES (mg/kg) / APS Organics	4900	250	1000	1000	ug/Kg
CA98175	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	16000	1000	1000	1000	ug/Kg
CA98175	$8100SMR	Benzo(ghi)perylene	CT / RSR DEC RES (mg/kg) / APS Organics	12000	1000	8400	8400	ug/Kg
CA98175	$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	24000	1000	1000	1000	ug/Kg
CA98175	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	23000	1000	1000	1000	ug/Kg
CA98175	$8100SMR	Benzo(k)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	18000	1000	8400	8400	ug/Kg
CA98175	$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	35000	1000	1000	1000	ug/Kg
CA98175	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	16000	1000	1000	1000	ug/Kg
CA98175	$8100SMR	Dibenz(a,h)anthracene	CT / RSR GB (mg/kg) / APS Organics	4900	250	1000	1000	ug/Kg
CA98175	$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	33000	1000	1000	1000	ug/Kg
CA98175	$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	12000	1000	1000	1000	ug/Kg
CA98175	$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	35000	1000	1000	1000	ug/Kg
CA98175	$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	23000	1000	1000	1000	ug/Kg
CA98175	$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	24000	1000	1000	1000	ug/Kg
CA98175	$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	18000	1000	1000	1000	ug/Kg
CA98175	$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR DEC RES (mg/kg) / Pest/PCB/TPH	630	270	500	500	mg/Kg
CA98176	$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	2500	250	1000	1000	ug/Kg
CA98176	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	1700	250	1000	1000	ug/Kg
CA98176	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	2300	250	1000	1000	ug/Kg
CA98176	$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1400	250	1000	1000	ug/Kg
CA98176	$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	2500	250	1000	1000	ug/Kg

Thursday, August 09, 2018

Criteria: CT: GBM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCA98174 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CA98176	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	1700	250	1000	1000	ug/Kg
CA98176	$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	1600	250	1000	1000	ug/Kg
CA98176	$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	1300	250	1000	1000	ug/Kg
CA98176	$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	1800	250	1000	1000	ug/Kg
CA98176	$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	2500	250	1000	1000	ug/Kg
CA98176	$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	1400	250	1000	1000	ug/Kg
CA98176	$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	2300	250	1000	1000	ug/Kg
CA98179	$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	3400	240	1000	1000	ug/Kg
CA98179	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	2500	240	1000	1000	ug/Kg
CA98179	$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	3700	240	1000	1000	ug/Kg
CA98179	$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	3400	240	1000	1000	ug/Kg
CA98179	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	3100	240	1000	1000	ug/Kg
CA98179	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	2500	240	1000	1000	ug/Kg
CA98179	$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	2100	240	1000	1000	ug/Kg
CA98179	$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	3800	240	1000	1000	ug/Kg
CA98179	$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	3700	240	1000	1000	ug/Kg
CA98179	$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	2800	240	1000	1000	ug/Kg
CA98179	$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	3100	240	1000	1000	ug/Kg
CA98179	$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	3400	240	1000	1000	ug/Kg
CA98180	$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC I/C (mg/kg) / APS Organics	1700	1000	1000	1000	ug/Kg
CA98180	$8100SMR	Benz(a)anthracene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	14000	1000	7800	7800	ug/Kg
CA98180	$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	11000	1000	1000	1000	ug/Kg
CA98180	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	9900	1000	7800	7800	ug/Kg
CA98180	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	7700	1000	1000	1000	ug/Kg
CA98180	$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC RES (mg/kg) / APS Organics	1700	1000	1000	1000	ug/Kg
CA98180	$8100SMR	Benzo(k)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	9600	1000	8400	8400	ug/Kg
CA98180	$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	14000	1000	1000	1000	ug/Kg
CA98180	$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	11000	1000	1000	1000	ug/Kg
CA98180	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	9900	1000	1000	1000	ug/Kg
CA98180	$8100SMR	Dibenz(a,h)anthracene	CT / RSR GB (mg/kg) / APS Organics	1700	1000	1000	1000	ug/Kg
CA98180	$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	14000	1000	1000	1000	ug/Kg
CA98180	$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	6700	1000	1000	1000	ug/Kg
CA98180	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	7700	1000	1000	1000	ug/Kg
CA98180	$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	11000	1000	1000	1000	ug/Kg
CA98180	$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	9900	1000	1000	1000	ug/Kg
CA98180	$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	9600	1000	1000	1000	ug/Kg
CA98180	$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	14000	1000	1000	1000	ug/Kg
CA98182	$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	2300	250	1000	1000	ug/Kg
CA98182	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	1600	250	1000	1000	ug/Kg
CA98182	$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	2300	250	1000	1000	ug/Kg

Thursday, August 09, 2018

Criteria: CT: GBM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCA98174 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CA98182	$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	2300	250	1000	1000	ug/Kg
CA98182	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	2200	250	1000	1000	ug/Kg
CA98182	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	1600	250	1000	1000	ug/Kg
CA98182	$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	2300	250	1000	1000	ug/Kg
CA98182	$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	1300	250	1000	1000	ug/Kg
CA98182	$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	2200	250	1000	1000	ug/Kg
CA98182	$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	2300	250	1000	1000	ug/Kg
CA98182	$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	2300	250	1000	1000	ug/Kg
CA98182	$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	1700	250	1000	1000	ug/Kg
CA98183	AS-SM	Arsenic	CT / RSR DEC I/C (mg/kg) / Inorganics	147	0.76	10	10	mg/Kg
CA98183	AS-SM	Arsenic	CT / RSR DEC RES (mg/kg) / Inorganics	147	0.76	10	10	mg/Kg
CA98185	$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC I/C (mg/kg) / APS Organics	ND	1200	1000	1000	ug/Kg
CA98185	$8100SMR	Benz(a)anthracene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	12000	1200	7800	7800	ug/Kg
CA98185	$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	7900	1200	1000	1000	ug/Kg
CA98185	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	3500	1200	1000	1000	ug/Kg
CA98185	$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC RES (mg/kg) / APS Organics	ND	1200	1000	1000	ug/Kg
CA98185	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	3900	1300	1000	1000	ug/Kg
CA98185	$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	7900	1200	1000	1000	ug/Kg
CA98185	$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	12000	1200	1000	1000	ug/Kg
CA98185	$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	3700	1200	1000	1000	ug/Kg
CA98185	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	3500	1200	1000	1000	ug/Kg
CA98185	$8100SMR	Dibenz(a,h)anthracene	CT / RSR GB (mg/kg) / APS Organics	ND	1200	1000	1000	ug/Kg
CA98185	$8100SMR	2-Methylnaphthalene	CT / RSR GB (mg/kg) / APS Organics	45000	2600	5600	5600	ug/Kg
CA98185	$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	14000	1200	1000	1000	ug/Kg
CA98185	$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	3900	1300	1000	1000	ug/Kg
CA98185	$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	7900	1200	1000	1000	ug/Kg
CA98185	$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	12000	1200	1000	1000	ug/Kg
CA98185	$8100SMR	Phenanthrene	CT / RSR GB (mg/kg) / Semivolatiles	53000	2600	40000	40000	ug/Kg
CA98185	$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	6600	1200	1000	1000	ug/Kg
CA98185	$8260MAR	1,2-Dibromoethane	CT / RSR DEC I/C (mg/kg) / Volatiles	ND	68	67	67	ug/Kg
CA98185	$8260MAR	1,2-Dibromo-3-chloropropane	CT / RSR DEC RES (mg/kg) / APS Organics	ND	140	90	90	ug/Kg
CA98185	$8260MAR	1,2-Dibromoethane	CT / RSR DEC RES (mg/kg) / Volatiles	ND	68	7	7	ug/Kg
CA98185	$8260MAR	1,2-Dibromo-3-chloropropane	CT / RSR GB (mg/kg) / APS Organics	ND	140	40	40	ug/Kg
CA98185	$8260MAR	Dibromochloromethane	CT / RSR GB (mg/kg) / Volatiles	ND	140	100	100	ug/Kg
CA98185	$8260MAR	1,1,2,2-Tetrachloroethane	CT / RSR GB (mg/kg) / Volatiles	ND	140	100	100	ug/Kg
CA98185	$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR DEC I/C (mg/kg) / Pest/PCB/TPH	4200	280	2500	2500	mg/Kg
CA98185	$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR DEC RES (mg/kg) / Pest/PCB/TPH	4200	280	500	500	mg/Kg
CA98185	$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR GB (mg/kg) / Pesticides/TPH	4200	280	2500	2500	mg/Kg

Thursday, August 09, 2018

Criteria: CT: GBM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCA98174 - TIGHE-DAS

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

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

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

Project Location: ROCKVILLE MGP ***Project Number:***

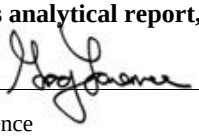
Laboratory Sample ID(s): CA98174-CA98183, CA98185 ***Sampling Date(s):*** 7/24/2018, 7/25/2018

List RCP Methods Used (e.g., 8260, 8270, et cetera) 1311/1312, 6010, 7470/7471, 8082, 8260, 8270, ETPH, 9010/9012

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	***VPH and EPH methods only:*** **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 Reasonable Confidence Protocol documents acheived? See Section: SVOA Narration.**	☐ Yes ☑ No
5	**a) Were reporting limits specified or referenced on the chain-of-custody?** **b) Were these reporting limits met?**	☑ Yes ☐ No ☐ 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 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:** Thursday, August 09, 2018

Name of Laboratory Phoenix Environmental Labs, Inc.

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

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RCP Certification Report

August 09, 2018

SDG I.D.: GCA98174

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.

Sample ID: CA98185
Not all of the requested criteria could be achieved due to the concentration of target and non-target compounds. Refer to the Sample Criteria Exceedances Report section of this report.

Cyanide Narration

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

Instrument:

LACHAT 07/27/18-1 Dustin Harrison, Greg Danielewski, Chemist 07/27/18

CA98174, CA98175, CA98176, CA98177, CA98179, CA98180, CA98182, CA98183, CA98185

The samples were distilled in accordance with the method.
The initial calibration met criteria.

The calibration check standards (ICV,CCV) were within 15% of true value and were analyzed at a frequencey of one per ten samples.
The continuing calibration blanks (ICB,CCB) had concentrations less than the reporting level.

The method blank, laboratory control sample (LCS), and matrix spike were distilled with the samples.

QC (Site Specific):

Batch 440581 (CA98176)

CA98174, CA98175, CA98176, CA98177, CA98179, CA98180, CA98182, CA98183, CA98185

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils

ETPH Narration

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

Instrument:

AU-FID1 07/27/18-1 Jeff Bucko, Chemist 07/27/18

CA98185

The initial calibration (ETPH723I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-FID11 07/26/18-1 Jeff Bucko, Chemist 07/26/18

CA98181, CA98183

The initial calibration (ETPH627I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-FID11 07/27/18-1 Jeff Bucko, Chemist 07/27/18

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NY # 11301

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August 09, 2018

SDG I.D.: GCA98174

ETPH Narration

CA98174, CA98175, CA98176, CA98179, CA98180

The initial calibration (ETPH627I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-XL1 07/26/18-1 Jeff Bucko, Chemist 07/26/18

CA98177, CA98178

The initial calibration (ETPH726I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-XL2 07/26/18-1 Jeff Bucko, Chemist 07/26/18

CA98182

The initial calibration (ETPH705I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 440478 (CA97861)

CA98174, CA98175, CA98176, CA98177, CA98178, CA98179, CA98180, CA98181, CA98182, CA98183, CA98185

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 07/26/18 08:08 Rick Schweitzer, Chemist 07/26/18

CA98174, CA98175, CA98176, CA98177, CA98178, CA98179, CA98180, CA98181, CA98182, CA98183, CA98185

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.

MERLIN 07/27/18 07:20 Rick Schweitzer, Chemist 07/27/18

CA98178, CA98181

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.

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NY # 11301

Certification Report

August 09, 2018

SDG I.D.: GCA98174

Mercury Narration

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

MERLIN 08/07/18 08:24 Rick Schweitzer, Chemist 08/07/18

CA98176, CA98182

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 440447 (CA97790)

CA98174

All LCS recoveries were within 80 - 120 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%.

Batch 440468 (CA98143)

CA98174, CA98175, CA98176, CA98177, CA98178, CA98179, CA98180, CA98181, CA98182, CA98183, CA98185

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

Batch 440639 (CA96173)

CA98178, CA98181

All LCS recoveries were within 80 - 120 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%.

Batch 442008 (CB05482)

CA98176

All LCS recoveries were within 80 - 120 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%.

QC (Site Specific):

Batch 442009 (CA98182)

CA98182

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All MS recoveries were within 75 - 125 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%.

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Certification Report

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SDG I.D.: GCA98174

Mercury Narration

ICP Metals Narration

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

Instrument:

ARCOS 07/27/18 10:11 Cindy Pearce, Emily Kolominskaya, Chemist 07/27/18

CA98174, CA98175, CA98176, CA98177, CA98178, CA98179, CA98180, CA98181, CA98182, CA98183, CA98185

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.

ARCOS 07/30/18 08:44 Cindy Pearce, Emily Kolominskaya, Chemist 07/30/18

CA98176

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.

BLUE 07/26/18 11:34 Cindy Pearce, Chemist 07/26/18

CA98174

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.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.

BLUE 07/27/18 09:57 Cindy Pearce, Emily Kolominskaya, Chemist 07/27/18

CA98178, CA98181

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.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.

BLUE 08/07/18 13:40 Emily Kolominskaya, Chemist 08/07/18

CA98176, CA98182

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SDG I.D.: GCA98174

ICP Metals Narration

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.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 440453 (CA97658)

CA98174

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

Batch 440684 (CA96173)

CA98178, CA98181

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

Batch 442012 (CA96215)

CA98176, CA98182

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

QC (Site Specific):

Batch 440564 (CA98176)

CA98174, CA98175, CA98176, CA98177, CA98178, CA98179, CA98180, CA98181, CA98182, CA98183, CA98185

All LCS recoveries were within 75 - 125 with the following exceptions: None.
All MS 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-ECD29 08/07/18-1 Adam Werner, Chemist 08/07/18

CA98177, CA98180

The initial calibration (PC705AI) RSD for the compound list was less than 20% except for the following compounds: None.
The initial calibration (PC705BI) 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 441930 (CB04688)

CA98177, CA98180

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

August 09, 2018

SDG I.D.: GCA98174

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? No.

QC Batch 440548 (Samples: CA98174): -----

The QC recovery is below the lower range but within the method criteria. A low bias for this analyte is possible. (Pyridine)

The LCS/LCSD recovery is below the lower range but within the method criteria. The Batch MS/MSD recovery is acceptable. A low bias for these analytes is possible. (2,4-Dinitrophenol)

The LCS/LCSD recovery is below the method criteria. The Batch MS/MSD recovery is acceptable. A low bias for these analytes is possible.(Benzoic Acid)

The LCSD recovery is below the lower range but within the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (4,6-Dinitro-2-methylphenol)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (2,4-Dinitrophenol, Benzidine)

Instrument:

CHEM05 07/26/18-2 Matt Richard, Chemist 07/26/18

CA98174

Initial Calibration Verification (CHEM05/SPLIT_0722):
95% of target compounds met criteria.
The following compounds had %RSDs >20%: 2,4-Dinitrophenol 37% (20%), Benzidine 28% (20%)
The following compounds did not meet recommended response factors: Bis(2-chloroethoxy)methane 0.288 (0.3)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM05/0726_17-SPLIT_0722):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: N-Nitrosodimethylamine 33%L (30%), Pyridine 37%L (30%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: Bis(2-chloroethoxy)methane 0.273 (0.3)
The following compounds did not meet minimum response factors: None.

CHEM05 07/30/18-1 Harry Mullin, Chemist 07/30/18

CA98177, CA98183

Initial Calibration Verification (CHEM05/SPLIT_0722):
95% 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 (CHEM05/0730_04-SPLIT_0722):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

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RCP Certification Report

August 09, 2018

SDG I.D.: GCA98174

SVOA Narration

98% 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.

CHEM06 07/26/18-1 Keith Aloisa, Chemist 07/26/18

CA98175, CA98176, CA98178, CA98179, CA98180, CA98181, CA98182, CA98185

The DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

Initial Calibration Verification (CHEM06/BN_0627):
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 (CHEM06/0726_04A-BN_0627):
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.

CHEM29 07/30/18-1 Harry Mullin, Chemist 07/30/18

CA98175, CA98180

Initial Calibration Verification (CHEM29/SPLIT_0726):
86% of target compounds met criteria.
The following compounds had %RSDs >20%: Benz(a)anthracene 40% (20%), Chrysene 40% (20%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM29/0730_02-SPLIT_0726):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% 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 440480 (CA98063)

CA98175, CA98176, CA98177, CA98178, CA98179, CA98180, CA98181, CA98182, CA98183, CA98185

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

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

August 09, 2018

SDG I.D.: GCA98174

SVOA Narration

surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

Batch 440548 (CA98577)

CA98174

All LCS recoveries were within 30 - 130 with the following exceptions: 2,4-Dinitrophenol(15%), Benzoic Acid(<10%), Pyridine(26%)
All LCSD recoveries were within 30 - 130 with the following exceptions: 2,4-Dinitrophenol(11%), 4,6-Dinitro-2-methylphenol(29%), Benzoic Acid(<10%), Pyridine(23%)
All LCS/LCSD RPDs were less than 30% with the following exceptions: 2,4-Dinitrophenol(30.8%), Benzidine(31.3%)
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%)

VOA Narration

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

Instrument:

CHEM03 07/26/18-2 Jane Li, Chemist 07/26/18

CA98174, CA98176, CA98177, CA98179, CA98180, CA98182, CA98183

Initial Calibration Verification (CHEM03/VT-L0726):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: Acetone 25% (20%), Bromoform 26% (20%), Chloroethane 27% (20%)
The following compounds did not meet recommended response factors: Acetone 0.075 (0.1)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM03/0726L24-VT-L0726):
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.

CHEM03 07/27/18-1 Jane Li, Chemist 07/27/18

CA98176, CA98183

Initial Calibration Verification (CHEM03/VT-L0726):
96% 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 (CHEM03/0727L02-VT-L0726):
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.

CHEM03 07/28/18-1 Jane Li, Chemist 07/28/18

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RCP Certification Report

August 09, 2018

SDG I.D.: GCA98174

VOA Narration

CA98185

Initial Calibration Verification (CHEM03/VT-L0726):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: Acetone 25% (20%), Bromoform 26% (20%), Chloroethane 27% (20%)
The following compounds did not meet recommended response factors: Acetone 0.075 (0.1)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM03/0728L02-VT-L0726):
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 440692 (CA98497)

CA98174, CA98176, CA98177, CA98179, CA98180, CA98182, CA98183

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Batch 440854 (CA98838)

CA98185

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Batch 440858 (CA99053)

CA98176, CA98183

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Temperature Narration

The samples were received at 4.0C with cooling initiated.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler: Yes [X] No [ ]
Coolant: IPK [ ] ICE [X] No [ ]

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

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

Temp 4.0 °C Pg 1 of 1

Contact Options:
[ ] Fax:
[ ] Phone:
[X] Email: LWilley@CTriver.com

Customer: Tighe + Bond
Address: 213 Court St Suite 1100
Middletown CT

Project: Rockville MGP
Report to: ~~Tighe + Bond~~ Lynn Willey
Invoice to: Tighe + Bond

Project P.O: 14-0755-4413

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 7/25/14

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

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOC	SVOC	ETPH	TCN	Total Cyanide	SPLP RSR metals	Total RSR metals	Soil VOA Vials [X] methanol [X] H2O	GL Soil container ( ) oz	GL Soil container (9) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle
98174	SB-43 (0.5-2 ft)	S	7/24/14	9:40	X	X	X	X	X	X		3	1								
98175	SB-43 (5-7 ft)		7/24/14	10:50			X	X	X		X	3	1								
98176	SB-54 (0.5-2 ft)		7/25/14	9:20	X		X	X	X		X	3	1								
98177	SB-57 (2-4 ft)			10:05	X		X	X	X		X	3	1								
98178	~~DUP~~ SB-57 (8-10 ft)			10:20			X		X	X	X	3	1								
98179	SB-56 (0.5-2 ft)			10:30	X		X	X	X		X	3	1								
98180	SB-55 (2-4 ft)			10:50	X		X	X	X		X	3	1								
98181	SB-55 (8-9 ft)			10:55			X		X	X	X	3	1								
98182	SB-54 (2-4 ft)			11:10	X		X	X	X		X	3	1								
98183	SB-44 (3-5 ft)			13:30	X		X	X	X		X	3	1								
98184	SB-52 (1-3 ft)			14:20								3	1								
98185	SB-52 (16-18 ft)			14:50	X		X	X	X		X	3	1								

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	7/25/14	16:22

Comments, Special Requirements or Regulations:
Please Hold SB-52 (1-3 ft)
RGAS Pricing
Aware: 1I0D517BA

Turnaround:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[X] Standard
[ ] Other
* SURCHARGE APPLIES

RI
[ ] Direct Exposure (Residential)
[ ] GW
[ ] Other

CT
[X] RCP Cert
[ ] GW Protection
[ ] SW Protection
[ ] GA Mobility
[X] GB Mobility
[X] Residential DEC
[X] I/C DEC
[ ] Other

MA
[ ] MCP Certification
[ ] GW-1
[ ] GW-2
[ ] GW-3
[ ] S-1
[ ] S-2
[ ] S-3
[ ] MWRA eSMART
[ ] Other

State where samples were collected: CT

Data Format
[X] Excel
[X] PDF
[ ] GIS/Key
[ ] EQuIS
[X] Other Geotech

Data Package
[ ] Tier II Checklist
[ ] Full Data Package*
[X] Phoenix Std Report
[ ] Other
* SURCHARGE APPLIES

The Connecticut Light and Power Company
d/b/a Eversource Energy
Docket No. 26-05-10
Date Issued September 29, 2026
RSR-032 Attachment 17
Page 522 of 1282

Sarah Bell

From: Benjamin P. Caswell <BCaswell@tighebond.com>
Sent: Monday, August 06, 2018 2:02 PM
To: Sarah Bell
Cc: Lynn E. Willey
Subject: Additional Requests - Rockville MGP

Hi Sarah,

Thank you for getting the prelim data over. Can you please activate the following samples:

Phoenix ID	T&B ID	Analysis
GCA98180	SB-55 (2-4 ft)	PCBs
GCA98177	SB-57 (2-4 ft)	PCBs
GCA98182	SB-54 (2-4 ft)	SPLP RSR Metals
GCA98176	SB-58 (0.5-2 ft)	SPLP RSR Metals
GCA98805	SB-31 (1-3 ft)	SPLP RSR Metals

Just a note the two samples for PCBs are out of hold time starting tomorrow.

Thank you,
Ben

Benjamin Caswell | Environmental Scientist
Tighe&Bond | 213 Court St., Suite 1100 | Middletown, CT 06457 | 860.852.5220 | 401.787.0905 (cell)
www.tighebond.com | Follow us on: Twitter Facebook LinkedIn

PHOENIX
Environmental Laboratories, Inc.

Friday, August 17, 2018

Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Project ID: ROCKVILLE MGP
Sample ID#s: CA98805 - CA98810

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.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

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

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Environmental Laboratories, Inc.
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Analysis Report

August 17, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		07/26/18	8:30
Location Code:	TIGHE	Received by:	SW	07/26/18	16:14
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCA98805
Phoenix ID: CA98805

Project ID: ROCKVILLE MGP
Client ID: SB-31 (1-3 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 3.0	3.0	mg/Kg	1	07/27/18	EK	SW6010C
Arsenic	3.62	0.80	mg/Kg	1	07/27/18	EK	SW6010C
Barium	46.2	0.40	mg/Kg	1	07/27/18	EK	SW6010C
Beryllium	0.45	0.32	mg/Kg	1	07/27/18	EK	SW6010C
Cadmium	< 0.40	0.40	mg/Kg	1	07/27/18	EK	SW6010C
Chromium	19.5	0.40	mg/Kg	1	07/27/18	EK	SW6010C
Copper	28.6	0.8	mg/kg	1	07/27/18	EK	SW6010C
Mercury	1.09	0.14	mg/Kg	1	07/27/18	RS	SW7471B
Nickel	14.0	0.40	mg/Kg	1	07/27/18	EK	SW6010C
Lead	134	0.40	mg/Kg	1	07/27/18	EK	SW6010C
Antimony	< 4.0	4.0	mg/Kg	1	07/27/18	EK	SW6010C
Selenium	< 5.2	5.2	mg/Kg	1	07/27/18	EK	SW6010C
SPLP Silver	< 0.010	0.010	mg/L	1	08/08/18	EK	SW6010C
SPLP Arsenic	< 0.004	0.004	mg/L	1	08/08/18	EK	SW6010C
SPLP Barium	0.014	0.010	mg/L	1	08/08/18	EK	SW6010C
SPLP Beryllium	< 0.001	0.001	mg/L	1	08/08/18	EK	SW6010C
SPLP Cadmium	< 0.005	0.005	mg/L	1	08/08/18	EK	SW6010C
SPLP Chromium	< 0.010	0.010	mg/L	1	08/08/18	EK	SW6010C
SPLP Copper	0.012	0.010	mg/L	1	08/08/18	EK	SW6010C
SPLP Mercury	0.0006	0.0005	mg/L	1	08/07/18	RS	SW7470A
SPLP Nickel	< 0.010	0.010	mg/L	1	08/08/18	EK	SW6010C
SPLP Lead	0.026	0.010	mg/L	1	08/08/18	EK	SW6010C
SPLP Antimony	< 0.005	0.005	mg/L	1	08/08/18	EK	SW6010C
SPLP Selenium	< 0.020	0.020	mg/L	1	08/08/18	EK	SW6010C
SPLP Thallium	< 0.005	0.005	mg/L	1	08/08/18	EK	SW6010C
SPLP Vanadium	< 0.010	0.010	mg/L	1	08/08/18	EK	SW6010C
SPLP Zinc	0.031	0.010	mg/L	1	08/08/18	EK	SW6010C
Thallium	< 3.6	3.6	mg/Kg	1	07/27/18	EK	SW6010C

Ver 2

Project ID: ROCKVILLE MGP
Client ID: SB-31 (1-3 FT)

Phoenix I.D.: CA98805

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
SPLP Metals Digestion	Completed				08/07/18	Q/I/Q	SW3010A
Vanadium	28.2	0.40	mg/Kg	1	07/27/18	EK	SW6010C
Zinc	82.1	0.8	mg/Kg	1	07/27/18	EK	SW6010C
Percent Solid	86		%		07/26/18	Q	SW846-%Solid
Total Cyanide (SW9010C Distill.)	26.5	0.58	mg/Kg	1	07/27/18	O/GD	SW9012B
Soil Extraction for Pesticide	Completed				08/03/18	JJ/V	SW3545A
Soil Extraction SVOA PAH	Completed				07/26/18	JJ/CKV	SW3545A
Mercury Digestion	Completed				07/27/18	I/I	SW7471B
SPLP Digestion Mercury	Completed				08/07/18	Q/I/Q	SW1312/SW7470A
SPLP Extraction for Metals	Completed				08/06/18	Q	SW1312
Total Metals Digest	Completed				07/26/18	KD/AG	SW3050B
Pesticides							
4,4' -DDD	ND	7.6	ug/Kg	2	08/13/18	CW	SW8081B
4,4' -DDE	ND	7.6	ug/Kg	2	08/13/18	CW	SW8081B
4,4' -DDT	ND	7.6	ug/Kg	2	08/13/18	CW	SW8081B
a-BHC	ND	7.6	ug/Kg	2	08/13/18	CW	SW8081B
Alachlor	ND	7.6	ug/Kg	2	08/13/18	CW	SW8081B
Aldrin	ND	3.8	ug/Kg	2	08/13/18	CW	SW8081B
b-BHC	ND	7.6	ug/Kg	2	08/13/18	CW	SW8081B
Chlordane	ND	38	ug/Kg	2	08/13/18	CW	SW8081B
d-BHC	ND	7.6	ug/Kg	2	08/13/18	CW	SW8081B
Dieldrin	4.9	3.8	ug/Kg	2	08/13/18	CW	SW8081B
Endosulfan I	ND	7.6	ug/Kg	2	08/13/18	CW	SW8081B
Endosulfan II	ND	7.6	ug/Kg	2	08/13/18	CW	SW8081B
Endosulfan sulfate	ND	7.6	ug/Kg	2	08/13/18	CW	SW8081B
Endrin	ND	7.6	ug/Kg	2	08/13/18	CW	SW8081B
Endrin aldehyde	ND	7.6	ug/Kg	2	08/13/18	CW	SW8081B
Endrin ketone	ND	7.6	ug/Kg	2	08/13/18	CW	SW8081B
g-BHC	ND	1.5	ug/Kg	2	08/13/18	CW	SW8081B
Heptachlor	ND	7.6	ug/Kg	2	08/13/18	CW	SW8081B
Heptachlor epoxide	ND	7.6	ug/Kg	2	08/13/18	CW	SW8081B
Methoxychlor	ND	38	ug/Kg	2	08/13/18	CW	SW8081B
Toxaphene	ND	150	ug/Kg	2	08/13/18	CW	SW8081B
QA/QC Surrogates							
% DCBP	75		%	2	08/13/18	CW	30 - 150 %
% TCMX	113		%	2	08/13/18	CW	30 - 150 %
Semivolatiles							
1,2,4,5-Tetrachlorobenzene	ND	1000	ug/Kg	10	07/27/18	KCA	SW8270D
1,2,4-Trichlorobenzene	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
1,2-Dichlorobenzene	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
1,2-Diphenylhydrazine	ND	770	ug/Kg	10	07/27/18	KCA	SW8270D
1,3-Dichlorobenzene	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
1,4-Dichlorobenzene	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
2,4,5-Trichlorophenol	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
2,4,6-Trichlorophenol	ND	1000	ug/Kg	10	07/27/18	KCA	SW8270D
2,4-Dichlorophenol	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
2,4-Dimethylphenol	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
2,4-Dinitrophenol	ND	2800	ug/Kg	10	07/27/18	KCA	SW8270D

Ver 2

Project ID: ROCKVILLE MGP
Client ID: SB-31 (1-3 FT)

Phoenix I.D.: CA98805

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,4-Dinitrotoluene	ND	1500	ug/Kg	10	07/27/18	KCA	SW8270D
2,6-Dinitrotoluene	ND	1200	ug/Kg	10	07/27/18	KCA	SW8270D
2-Chloronaphthalene	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
2-Chlorophenol	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
2-Methylnaphthalene	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
2-Nitroaniline	ND	2000	ug/Kg	10	07/27/18	KCA	SW8270D
2-Nitrophenol	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	3800	ug/Kg	10	07/27/18	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	1000	ug/Kg	10	07/27/18	KCA	SW8270D
3-Nitroaniline	ND	2000	ug/Kg	10	07/27/18	KCA	SW8270D
4,6-Dinitro-2-methylphenol	ND	2000	ug/Kg	10	07/27/18	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	3800	ug/Kg	10	07/27/18	KCA	SW8270D
4-Chloro-3-methylphenol	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
4-Chloroaniline	ND	1500	ug/Kg	10	07/27/18	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
4-Nitroaniline	ND	2000	ug/Kg	10	07/27/18	KCA	SW8270D
4-Nitrophenol	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Acenaphthene	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Acenaphthylene	8300	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Acetophenone	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Aniline	ND	1200	ug/Kg	10	07/27/18	KCA	SW8270D
Anthracene	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Benz(a)anthracene	2000	1000	ug/Kg	10	07/27/18	KCA	SW8270D
Benzidine	ND	1500	ug/Kg	10	07/27/18	KCA	SW8270D
Benzo(a)pyrene	2900	1200	ug/Kg	10	07/27/18	KCA	SW8270D
Benzo(b)fluoranthene	3000	1000	ug/Kg	10	07/27/18	KCA	SW8270D
Benzo(ghi)perylene	9400	1000	ug/Kg	10	07/27/18	KCA	SW8270D
Benzo(k)fluoranthene	3200	1000	ug/Kg	10	07/27/18	KCA	SW8270D
Benzoic acid	ND	7600	ug/Kg	10	07/27/18	KCA	SW8270D
Benzyl butyl phthalate	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	1000	ug/Kg	10	07/27/18	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	2400	ug/Kg	10	07/27/18	KCA	SW8270D
Bis(2-ethylhexyl)phthalate	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Carbazole	ND	1000	ug/Kg	10	07/27/18	KCA	SW8270D
Chrysene	3000	1000	ug/Kg	10	07/27/18	KCA	SW8270D
Dibenz(a,h)anthracene	1300	1200	ug/Kg	10	07/27/18	KCA	SW8270D
Dibenzofuran	ND	1000	ug/Kg	10	07/27/18	KCA	SW8270D
Diethyl phthalate	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Dimethylphthalate	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Di-n-butylphthalate	ND	3800	ug/Kg	10	07/27/18	KCA	SW8270D
Di-n-octylphthalate	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Fluoranthene	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Fluorene	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Hexachlorobenzene	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Hexachlorobutadiene	ND	1500	ug/Kg	10	07/27/18	KCA	SW8270D
Hexachlorocyclopentadiene	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Hexachloroethane	ND	1000	ug/Kg	10	07/27/18	KCA	SW8270D

Project ID: ROCKVILLE MGP
Client ID: SB-31 (1-3 FT)

Phoenix I.D.: CA98805

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Indeno(1,2,3-cd)pyrene	6800	1300	ug/Kg	10	07/27/18	KCA	SW8270D
Isophorone	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Naphthalene	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Nitrobenzene	ND	1000	ug/Kg	10	07/27/18	KCA	SW8270D
N-Nitrosodimethylamine	ND	760	ug/Kg	10	07/27/18	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	760	ug/Kg	10	07/27/18	KCA	SW8270D
N-Nitrosodiphenylamine	ND	1400	ug/Kg	10	07/27/18	KCA	SW8270D
Pentachloronitrobenzene	ND	1400	ug/Kg	10	07/27/18	KCA	SW8270D
Pentachlorophenol	ND	1400	ug/Kg	10	07/27/18	KCA	SW8270D
Phenanthrene	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Phenol	ND	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Pyrene	4000	2700	ug/Kg	10	07/27/18	KCA	SW8270D
Pyridine	ND	1000	ug/Kg	10	07/27/18	KCA	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	Diluted Out		%	10	07/27/18	KCA	30 - 130 %
% 2-Fluorobiphenyl	Diluted Out		%	10	07/27/18	KCA	30 - 130 %
% 2-Fluorophenol	Diluted Out		%	10	07/27/18	KCA	30 - 130 %
% Nitrobenzene-d5	Diluted Out		%	10	07/27/18	KCA	30 - 130 %
% Phenol-d5	Diluted Out		%	10	07/27/18	KCA	30 - 130 %
% Terphenyl-d14	Diluted Out		%	10	07/27/18	KCA	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:

Semi-Volatile Comment:
Due to a matrix interference and/or the presence of a large amount of non-target material in the sample, a dilution was required resulting in an elevated RL for the semivolatile analysis.

Semi-Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

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

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
August 17, 2018
Reviewed and Released by: Sarah Bell, Project Manager

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

Analysis Report

August 17, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		07/26/18	8:45
Location Code:	TIGHE	Received by:	SW	07/26/18	16:14
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCA98805
Phoenix ID: CA98806

Project ID: ROCKVILLE MGP
Client ID: SB-31 (15-17 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	87		%		07/26/18	Q	SW846-%Solid
Total Cyanide (SW9010C Distill.)	< 0.52	0.52	mg/Kg	1	08/06/18	O/GD	SW9012B
Soil Extraction SVOA PAH	Completed				08/03/18	JJ/CKV	SW3545A
Extraction of CT ETPH	Completed				07/27/18	KL/IG/VCK	SW3545A
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	6600	290	mg/Kg	5	07/30/18	AW	CTETPH 8015D
Identification	**		mg/Kg	5	07/30/18	AW	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	85		%	5	07/30/18	AW	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	200	ug/Kg	50	07/31/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	100	ug/Kg	50	07/31/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
1,1-Dichloroethane	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
1,1-Dichloroethene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
1,1-Dichloropropene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
1,2,4-Trimethylbenzene	2500	400	ug/Kg	50	07/31/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	80	ug/Kg	50	07/31/18	JLI	SW8260C
1,2-Dibromoethane	ND	40	ug/Kg	50	07/31/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
1,2-Dichloroethane	ND	200	ug/Kg	50	07/31/18	JLI	SW8260C
1,2-Dichloropropane	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C

Ver 2

Project ID: ROCKVILLE MGP
Client ID: SB-31 (15-17 FT)

Phoenix I.D.: CA98806

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3,5-Trimethylbenzene	800	400	ug/Kg	50	07/31/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
1,3-Dichloropropane	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
2,2-Dichloropropane	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
2-Chlorotoluene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
2-Hexanone	ND	2000	ug/Kg	50	07/31/18	JLI	SW8260C
2-Isopropyltoluene	180	160	ug/Kg	50	07/31/18	JLI	SW8260C
4-Chlorotoluene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	2000	ug/Kg	50	07/31/18	JLI	SW8260C
Acetone	ND	20000	ug/Kg	50	07/31/18	JLI	SW8260C
Acrylonitrile	ND	100	ug/Kg	50	07/31/18	JLI	SW8260C
Benzene	ND	200	ug/Kg	50	07/31/18	JLI	SW8260C
Bromobenzene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Bromochloromethane	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Bromodichloromethane	ND	210	ug/Kg	50	07/31/18	JLI	SW8260C
Bromoform	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Bromomethane	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Carbon Disulfide	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Carbon tetrachloride	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Chlorobenzene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Chloroethane	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Chloroform	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Chloromethane	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	100	ug/Kg	50	07/31/18	JLI	SW8260C
Dibromochloromethane	ND	100	ug/Kg	50	07/31/18	JLI	SW8260C
Dibromomethane	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Dichlorodifluoromethane	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Ethylbenzene	1300	400	ug/Kg	50	07/31/18	JLI	SW8260C
Hexachlorobutadiene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Isopropylbenzene	1200	400	ug/Kg	50	07/31/18	JLI	SW8260C
m&p-Xylene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	2400	ug/Kg	50	07/31/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	800	ug/Kg	50	07/31/18	JLI	SW8260C
Methylene chloride	ND	800	ug/Kg	50	07/31/18	JLI	SW8260C
Naphthalene	4200	400	ug/Kg	50	07/31/18	JLI	SW8260C
n-Butylbenzene	830	400	ug/Kg	50	07/31/18	JLI	SW8260C
n-Propylbenzene	1100	400	ug/Kg	50	07/31/18	JLI	SW8260C
o-Xylene	700	400	ug/Kg	50	07/31/18	JLI	SW8260C
p-Isopropyltoluene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
sec-Butylbenzene	250	240	ug/Kg	50	07/31/18	JLI	SW8260C
Styrene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
tert-Butylbenzene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Tetrachloroethene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	800	ug/Kg	50	07/31/18	JLI	SW8260C
Toluene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Total Xylenes	700	400	ug/Kg	50	07/31/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-31 (15-17 FT)

Phoenix I.D.: CA98806

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	100	ug/Kg	50	07/31/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	800	ug/Kg	50	07/31/18	JLI	SW8260C
Trichloroethene	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Trichlorofluoromethane	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	400	ug/Kg	50	07/31/18	JLI	SW8260C
Vinyl chloride	ND	320	ug/Kg	50	07/31/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	50	07/31/18	JLI	70 - 130 %
% Bromofluorobenzene	113		%	50	07/31/18	JLI	70 - 130 %
% Dibromofluoromethane	97		%	50	07/31/18	JLI	70 - 130 %
% Toluene-d8	94		%	50	07/31/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	ND	260	ug/Kg	1	08/04/18	HM	SW8270D
Acenaphthene	29000	1300	ug/Kg	5	08/05/18	HM	SW8270D
Acenaphthylene	2700	260	ug/Kg	1	08/04/18	HM	SW8270D
Anthracene	12000	1300	ug/Kg	5	08/05/18	HM	SW8270D
Benz(a)anthracene	6800	260	ug/Kg	1	08/04/18	HM	SW8270D
Benzo(a)pyrene	5500	260	ug/Kg	1	08/04/18	HM	SW8270D
Benzo(b)fluoranthene	2300	260	ug/Kg	1	08/04/18	HM	SW8270D
Benzo(ghi)perylene	2000	260	ug/Kg	1	08/04/18	HM	SW8270D
Benzo(k)fluoranthene	2900	260	ug/Kg	1	08/04/18	HM	SW8270D
Chrysene	5900	260	ug/Kg	1	08/04/18	HM	SW8270D
Dibenz(a,h)anthracene	430	260	ug/Kg	1	08/04/18	HM	SW8270D
Fluoranthene	14000	1300	ug/Kg	5	08/05/18	HM	SW8270D
Fluorene	17000	1300	ug/Kg	5	08/05/18	HM	SW8270D
Indeno(1,2,3-cd)pyrene	1900	260	ug/Kg	1	08/04/18	HM	SW8270D
Naphthalene	1700	260	ug/Kg	1	08/04/18	HM	SW8270D
Phenanthrene	35000	6500	ug/Kg	25	08/06/18	HM	SW8270D
Pyrene	20000	1300	ug/Kg	5	08/05/18	HM	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	66		%	1	08/04/18	HM	30 - 130 %
% Nitrobenzene-d5	74		%	1	08/04/18	HM	30 - 130 %
% Terphenyl-d14	73		%	1	08/04/18	HM	30 - 130 %
Field Extraction	Completed				07/26/18		SW5035A

Project ID: ROCKVILLE MGP
Client ID: SB-31 (15-17 FT)
Phoenix I.D.: CA98806

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

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:

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

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

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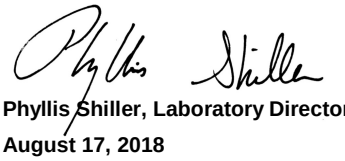

Phyllis Shiller, Laboratory Director
August 17, 2018
Reviewed and Released by: Sarah Bell, Project Manager

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

Analysis Report

August 17, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		07/26/18	11:00
Location Code:	TIGHE	Received by:	SW	07/26/18	16:14
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCA98805
Phoenix ID: CA98807

Project ID: ROCKVILLE MGP
Client ID: SB-30 (2-4 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 3.0	3.0	mg/Kg	1	07/27/18	EK	SW6010C
Arsenic	8.45	0.70	mg/Kg	1	07/27/18	EK	SW6010C
Barium	69.6	0.35	mg/Kg	1	07/27/18	EK	SW6010C
Beryllium	0.39	0.28	mg/Kg	1	07/27/18	EK	SW6010C
Cadmium	< 0.35	0.35	mg/Kg	1	07/27/18	EK	SW6010C
Chromium	27.0	0.35	mg/Kg	1	07/27/18	EK	SW6010C
Copper	37.8	0.8	mg/kg	1	07/27/18	EK	SW6010C
Mercury	0.21	0.15	mg/Kg	1	07/27/18	RS	SW7471B
Nickel	12.6	0.35	mg/Kg	1	07/27/18	EK	SW6010C
Lead	69.0	0.35	mg/Kg	1	07/27/18	EK	SW6010C
Antimony	< 3.5	3.5	mg/Kg	1	07/27/18	EK	SW6010C
Selenium	< 5.2	5.2	mg/Kg	1	07/27/18	EK	SW6010C
Thallium	< 3.2	3.2	mg/Kg	1	07/27/18	EK	SW6010C
Vanadium	33.3	0.35	mg/Kg	1	07/27/18	EK	SW6010C
Zinc	30.0	0.8	mg/Kg	1	07/27/18	EK	SW6010C
Percent Solid	88		%		07/26/18	Q	SW846-%Solid
Total Cyanide (SW9010C Distill.)	27.3	0.52	mg/Kg	1	07/30/18	O/GD	SW9012B
Soil Extraction for SVOA	Completed				07/26/18	JJ/CKV	SW3545A
Extraction of CT ETPH	Completed				07/27/18	KL/IG/VCK	SW3545A
Mercury Digestion	Completed				07/27/18	I/I	SW7471B
Total Metals Digest	Completed				07/26/18	KD/AG	SW3050B
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	760	280	mg/Kg	5	07/30/18	AW	CTETPH 8015D
Identification	**		mg/Kg	5	07/30/18	AW	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	96		%	5	07/30/18	AW	50 - 150 %

Ver 2

Project ID: ROCKVILLE MGP
Client ID: SB-30 (2-4 FT)

Phoenix I.D.: CA98807

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	100	ug/Kg	50	07/28/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
1,1-Dichloroethane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
1,1-Dichloroethene	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
1,1-Dichloropropene	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dibromoethane	ND	7.0	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
1,2-Dichloroethane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dichloropropane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
1,3-Dichloropropane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
2,2-Dichloropropane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
2-Chlorotoluene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
2-Hexanone	ND	37	ug/Kg	1	07/28/18	JLI	SW8260C
2-Isopropyltoluene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
4-Chlorotoluene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	37	ug/Kg	1	07/28/18	JLI	SW8260C
Acetone	ND	370	ug/Kg	1	07/28/18	JLI	SW8260C
Acrylonitrile	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Benzene	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Bromobenzene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
Bromochloromethane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Bromodichloromethane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Bromoform	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Bromomethane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Carbon Disulfide	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Carbon tetrachloride	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Chlorobenzene	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Chloroethane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Chloroform	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Chloromethane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Dibromochloromethane	ND	4.5	ug/Kg	1	07/28/18	JLI	SW8260C
Dibromomethane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Dichlorodifluoromethane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Ethylbenzene	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Hexachlorobutadiene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
Isopropylbenzene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-30 (2-4 FT)

Phoenix I.D.: CA98807

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	45	ug/Kg	1	07/28/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	15	ug/Kg	1	07/28/18	JLI	SW8260C
Methylene chloride	ND	15	ug/Kg	1	07/28/18	JLI	SW8260C
Naphthalene	380	380	ug/Kg	50	07/28/18	JLI	SW8260C
n-Butylbenzene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
n-Propylbenzene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
o-Xylene	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
p-Isopropyltoluene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
sec-Butylbenzene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
Styrene	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
tert-Butylbenzene	ND	470	ug/Kg	50	07/28/18	JLI	SW8260C
Tetrachloroethene	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	15	ug/Kg	1	07/28/18	JLI	SW8260C
Toluene	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Total Xylenes	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	940	ug/Kg	50	07/28/18	JLI	SW8260C
Trichloroethene	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Trichlorofluoromethane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
Vinyl chloride	ND	7.4	ug/Kg	1	07/28/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	50	07/28/18	JLI	70 - 130 %
% Bromofluorobenzene	95		%	50	07/28/18	JLI	70 - 130 %
% Dibromofluoromethane	110		%	1	07/28/18	JLI	70 - 130 %
% Toluene-d8	98		%	1	07/28/18	JLI	70 - 130 %
Semivolatiles							
1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
1,2-Diphenylhydrazine	ND	380	ug/Kg	1	07/27/18	HM	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
2,4-Dinitrophenol	ND	380	ug/Kg	1	07/27/18	HM	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
2-Methylnaphthalene	300	260	ug/Kg	1	07/27/18	HM	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
2-Nitroaniline	ND	380	ug/Kg	1	07/27/18	HM	SW8270D
2-Nitrophenol	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	380	ug/Kg	1	07/27/18	HM	SW8270D

Ver 2

Project ID: ROCKVILLE MGP
Client ID: SB-30 (2-4 FT)

Phoenix I.D.: CA98807

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
3-Nitroaniline	ND	380	ug/Kg	1	07/27/18	HM	SW8270D
4,6-Dinitro-2-methylphenol	ND	380	ug/Kg	1	07/27/18	HM	SW8270D
4-Bromophenyl phenyl ether	ND	380	ug/Kg	1	07/27/18	HM	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
4-Nitroaniline	ND	600	ug/Kg	1	07/27/18	HM	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
Acenaphthene	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
Acenaphthylene	2000	260	ug/Kg	1	07/27/18	HM	SW8270D
Acetophenone	ND	300	ug/Kg	1	07/27/18	HM	SW8270D
Aniline	ND	380	ug/Kg	1	07/27/18	HM	SW8270D
Anthracene	910	260	ug/Kg	1	07/27/18	HM	SW8270D
Benz(a)anthracene	2100	260	ug/Kg	1	07/27/18	HM	SW8270D
Benzidine	ND	200	ug/Kg	1	07/27/18	HM	SW8270D
Benzo(a)pyrene	1900	260	ug/Kg	1	07/27/18	HM	SW8270D
Benzo(b)fluoranthene	3100	260	ug/Kg	1	07/27/18	HM	SW8270D
Benzo(ghi)perylene	2300	260	ug/Kg	1	07/27/18	HM	SW8270D
Benzo(k)fluoranthene	2900	260	ug/Kg	1	07/27/18	HM	SW8270D
Benzoic acid	ND	750	ug/Kg	1	07/27/18	HM	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
Bis(2-chloroethyl)ether	ND	380	ug/Kg	1	07/27/18	HM	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
Carbazole	ND	380	ug/Kg	1	07/27/18	HM	SW8270D
Chrysene	3300	260	ug/Kg	1	07/27/18	HM	SW8270D
Dibenz(a,h)anthracene	660	260	ug/Kg	1	07/27/18	HM	SW8270D
Dibenzofuran	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
Di-n-butylphthalate	ND	380	ug/Kg	1	07/27/18	HM	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
Fluoranthene	3200	260	ug/Kg	1	07/27/18	HM	SW8270D
Fluorene	360	260	ug/Kg	1	07/27/18	HM	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
Indeno(1,2,3-cd)pyrene	2400	260	ug/Kg	1	07/27/18	HM	SW8270D
Isophorone	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
Naphthalene	400	260	ug/Kg	1	07/27/18	HM	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
N-Nitrosodimethylamine	ND	200	ug/Kg	1	07/27/18	HM	SW8270D
N-Nitrosodi-n-propylamine	ND	200	ug/Kg	1	07/27/18	HM	SW8270D
N-Nitrosodiphenylamine	ND	380	ug/Kg	1	07/27/18	HM	SW8270D
Pentachloronitrobenzene	ND	380	ug/Kg	1	07/27/18	HM	SW8270D
Pentachlorophenol	ND	380	ug/Kg	1	07/27/18	HM	SW8270D

Project ID: ROCKVILLE MGP
Client ID: SB-30 (2-4 FT)

Phoenix I.D.: CA98807

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	2400	260	ug/Kg	1	07/27/18	HM	SW8270D
Phenol	ND	260	ug/Kg	1	07/27/18	HM	SW8270D
Pyrene	4000	260	ug/Kg	1	07/27/18	HM	SW8270D
Pyridine	ND	380	ug/Kg	1	07/27/18	HM	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	53		%	1	07/27/18	HM	30 - 130 %
% 2-Fluorobiphenyl	53		%	1	07/27/18	HM	30 - 130 %
% 2-Fluorophenol	54		%	1	07/27/18	HM	30 - 130 %
% Nitrobenzene-d5	56		%	1	07/27/18	HM	30 - 130 %
% Phenol-d5	59		%	1	07/27/18	HM	30 - 130 %
% Terphenyl-d14	60		%	1	07/27/18	HM	30 - 130 %
Field Extraction	Completed				07/26/18		SW5035A

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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Semi-Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

Volatile Comment:
There was a suppression of the last internal standard in the low level analysis, all affected compounds are reported from the methanol preserved high level analysis which did not exhibit this interference.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

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

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
August 17, 2018
Reviewed and Released by: Sarah Bell, Project Manager

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

Analysis Report

August 17, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		07/26/18	12:00
Location Code:	TIGHE	Received by:	SW	07/26/18	16:14
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCA98805
Phoenix ID: CA98808

Project ID: ROCKVILLE MGP
Client ID: SB-30 (15-17 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	93		%		07/26/18	Q	SW846-%Solid
Total Cyanide (SW9010C Distill.)	< 0.54	0.54	mg/Kg	1	07/30/18	O/GD	SW9012B
Soil Extraction SVOA PAH	Completed				07/26/18	JJ/CKV	SW3545A
Extraction of CT ETPH	Completed				07/27/18	KL/IG/VCK	SW3545A
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	710	270	mg/Kg	5	07/30/18	AW	CTETPH 8015D
Identification	**		mg/Kg	5	07/30/18	AW	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	65		%	5	07/30/18	AW	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.2	ug/Kg	1	07/28/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
1,1-Dichloroethane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
1,1-Dichloroethene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
1,1-Dichloropropene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dibromoethane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dichloroethane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dichloropropane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-30 (15-17 FT)

Phoenix I.D.: CA98808

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3,5-Trimethylbenzene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
1,3-Dichloropropane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
2,2-Dichloropropane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
2-Chlorotoluene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
2-Hexanone	ND	26	ug/Kg	1	07/28/18	JLI	SW8260C
2-Isopropyltoluene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
4-Chlorotoluene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	26	ug/Kg	1	07/28/18	JLI	SW8260C
Acetone	ND	260	ug/Kg	1	07/28/18	JLI	SW8260C
Acrylonitrile	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Benzene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Bromobenzene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Bromochloromethane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Bromodichloromethane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Bromoform	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Bromomethane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Carbon Disulfide	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Carbon tetrachloride	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Chlorobenzene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Chloroethane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Chloroform	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Chloromethane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Dibromochloromethane	ND	3.2	ug/Kg	1	07/28/18	JLI	SW8260C
Dibromomethane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Dichlorodifluoromethane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Ethylbenzene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Hexachlorobutadiene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Isopropylbenzene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
m&p-Xylene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	32	ug/Kg	1	07/28/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	11	ug/Kg	1	07/28/18	JLI	SW8260C
Methylene chloride	ND	11	ug/Kg	1	07/28/18	JLI	SW8260C
Naphthalene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
n-Butylbenzene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
n-Propylbenzene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
o-Xylene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
p-Isopropyltoluene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
sec-Butylbenzene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Styrene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
tert-Butylbenzene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Tetrachloroethene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	11	ug/Kg	1	07/28/18	JLI	SW8260C
Toluene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Total Xylenes	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-30 (15-17 FT)

Phoenix I.D.: CA98808

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	11	ug/Kg	1	07/28/18	JLI	SW8260C
Trichloroethene	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Trichlorofluoromethane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
Vinyl chloride	ND	5.3	ug/Kg	1	07/28/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	07/28/18	JLI	70 - 130 %
% Bromofluorobenzene	94		%	1	07/28/18	JLI	70 - 130 %
% Dibromofluoromethane	102		%	1	07/28/18	JLI	70 - 130 %
% Toluene-d8	100		%	1	07/28/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Acenaphthene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Acenaphthylene	260	250	ug/Kg	1	07/27/18	HM	SW8270D
Anthracene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Benz(a)anthracene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Benzo(a)pyrene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Benzo(b)fluoranthene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Benzo(ghi)perylene	250	250	ug/Kg	1	07/27/18	HM	SW8270D
Benzo(k)fluoranthene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Chrysene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Fluoranthene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Fluorene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Indeno(1,2,3-cd)pyrene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Naphthalene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Phenanthrene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Pyrene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	81		%	1	07/27/18	HM	30 - 130 %
% Nitrobenzene-d5	75		%	1	07/27/18	HM	30 - 130 %
% Terphenyl-d14	71		%	1	07/27/18	HM	30 - 130 %
Field Extraction	Completed				07/26/18		SW5035A

Project ID: ROCKVILLE MGP
Client ID: SB-30 (15-17 FT)
Phoenix I.D.: CA98808

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

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:

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

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

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
August 17, 2018
Reviewed and Released by: Sarah Bell, Project Manager

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

Analysis Report

August 17, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		07/26/18	13:30
Location Code:	TIGHE	Received by:	SW	07/26/18	16:14
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCA98805
Phoenix ID: CA98809

Project ID: ROCKVILLE MGP
Client ID: SB-28 (1-3 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 3.0	3.0	mg/Kg	1	07/27/18	EK	SW6010C
Arsenic	14.5	0.78	mg/Kg	1	07/27/18	EK	SW6010C
Barium	99.6	0.39	mg/Kg	1	07/27/18	EK	SW6010C
Beryllium	0.78	0.31	mg/Kg	1	07/27/18	EK	SW6010C
Cadmium	< 0.39	0.39	mg/Kg	1	07/27/18	EK	SW6010C
Chromium	13.3	0.39	mg/Kg	1	07/27/18	EK	SW6010C
Copper	74.5	0.8	mg/kg	1	07/27/18	EK	SW6010C
Mercury	< 0.13	0.13	mg/Kg	1	07/27/18	RS	SW7471B
Nickel	10.7	0.39	mg/Kg	1	07/27/18	EK	SW6010C
Lead	41.4	0.39	mg/Kg	1	07/27/18	EK	SW6010C
Antimony	< 3.9	3.9	mg/Kg	1	07/27/18	EK	SW6010C
Selenium	< 5.2	5.2	mg/Kg	1	07/27/18	EK	SW6010C
Thallium	< 3.5	3.5	mg/Kg	1	07/27/18	EK	SW6010C
Vanadium	18.8	0.39	mg/Kg	1	07/27/18	EK	SW6010C
Zinc	12.2	0.8	mg/Kg	1	07/27/18	EK	SW6010C
Percent Solid	92		%		07/26/18	Q	SW846-%Solid
Total Cyanide (SW9010C Distill.)	3.17	0.54	mg/Kg	1	07/30/18	O/GD	SW9012B
Soil Extraction for PCB	Completed				07/26/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				07/26/18	JJ/CKV	SW3545A
Extraction of CT ETPH	Completed				07/27/18	VS/VCK	SW3545A
Mercury Digestion	Completed				07/27/18	I/I	SW7471B
Total Metals Digest	Completed				07/26/18	KD/AG	SW3050B
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	320	54	mg/Kg	1	07/28/18	JRB	CTETPH 8015D
Identification	**		mg/Kg	1	07/28/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	98		%	1	07/28/18	JRB	50 - 150 %

Ver 2

Project ID: ROCKVILLE MGP
Client ID: SB-28 (1-3 FT)

Phoenix I.D.: CA98809

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Polychlorinated Biphenyls							
PCB-1016	ND	360	ug/Kg	10	07/28/18	AW	SW8082A
PCB-1221	ND	360	ug/Kg	10	07/28/18	AW	SW8082A
PCB-1232	ND	360	ug/Kg	10	07/28/18	AW	SW8082A
PCB-1242	ND	360	ug/Kg	10	07/28/18	AW	SW8082A
PCB-1248	ND	360	ug/Kg	10	07/28/18	AW	SW8082A
PCB-1254	ND	360	ug/Kg	10	07/28/18	AW	SW8082A
PCB-1260	ND	360	ug/Kg	10	07/28/18	AW	SW8082A
PCB-1262	ND	360	ug/Kg	10	07/28/18	AW	SW8082A
PCB-1268	ND	360	ug/Kg	10	07/28/18	AW	SW8082A
QA/QC Surrogates							
% DCBP	93		%	10	07/28/18	AW	30 - 150 %
% TCMX	81		%	10	07/28/18	AW	30 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.6	ug/Kg	1	07/28/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,1-Dichloroethane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,1-Dichloroethene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,1-Dichloropropene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dibromoethane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dichloroethane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dichloropropane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,3-Dichloropropane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
2,2-Dichloropropane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
2-Chlorotoluene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
2-Hexanone	ND	30	ug/Kg	1	07/28/18	JLI	SW8260C
2-Isopropyltoluene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
4-Chlorotoluene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	30	ug/Kg	1	07/28/18	JLI	SW8260C
Acetone	ND	300	ug/Kg	1	07/28/18	JLI	SW8260C
Acrylonitrile	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Benzene	3000	200	ug/Kg	50	07/28/18	JLI	SW8260C
Bromobenzene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Bromochloromethane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Bromodichloromethane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Bromoform	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Bromomethane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-28 (1-3 FT)

Phoenix I.D.: CA98809

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Carbon Disulfide	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Carbon tetrachloride	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Chlorobenzene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Chloroethane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Chloroform	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Chloromethane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Dibromochloromethane	ND	3.6	ug/Kg	1	07/28/18	JLI	SW8260C
Dibromomethane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Dichlorodifluoromethane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Ethylbenzene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Hexachlorobutadiene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Isopropylbenzene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
m&p-Xylene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	36	ug/Kg	1	07/28/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	12	ug/Kg	1	07/28/18	JLI	SW8260C
Methylene chloride	ND	12	ug/Kg	1	07/28/18	JLI	SW8260C
Naphthalene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
n-Butylbenzene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
n-Propylbenzene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
o-Xylene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
p-Isopropyltoluene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
sec-Butylbenzene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Styrene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
tert-Butylbenzene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Tetrachloroethene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	12	ug/Kg	1	07/28/18	JLI	SW8260C
Toluene	280	220	ug/Kg	50	07/28/18	JLI	SW8260C
Total Xylenes	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	12	ug/Kg	1	07/28/18	JLI	SW8260C
Trichloroethene	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Trichlorofluoromethane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
Vinyl chloride	ND	5.9	ug/Kg	1	07/28/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	113		%	1	07/28/18	JLI	70 - 130 %
% Bromofluorobenzene	85		%	1	07/28/18	JLI	70 - 130 %
% Dibromofluoromethane	106		%	1	07/28/18	JLI	70 - 130 %
% Toluene-d8	101		%	1	07/28/18	JLI	70 - 130 %
Semivolatiles							
1,2,4,5-Tetrachlorobenzene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
1,2,4-Trichlorobenzene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
1,2-Dichlorobenzene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
1,2-Diphenylhydrazine	ND	360	ug/Kg	1	07/27/18	HM	SW8270D
1,3-Dichlorobenzene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
1,4-Dichlorobenzene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D

Ver 2

Project ID: ROCKVILLE MGP
Client ID: SB-28 (1-3 FT)

Phoenix I.D.: CA98809

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,4,5-Trichlorophenol	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
2,4,6-Trichlorophenol	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
2,4-Dichlorophenol	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
2,4-Dimethylphenol	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
2,4-Dinitrophenol	ND	360	ug/Kg	1	07/27/18	HM	SW8270D
2,4-Dinitrotoluene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
2,6-Dinitrotoluene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
2-Chloronaphthalene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
2-Chlorophenol	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
2-Methylnaphthalene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
2-Methylphenol (o-cresol)	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
2-Nitroaniline	ND	360	ug/Kg	1	07/27/18	HM	SW8270D
2-Nitrophenol	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	360	ug/Kg	1	07/27/18	HM	SW8270D
3,3'-Dichlorobenzidine	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
3-Nitroaniline	ND	360	ug/Kg	1	07/27/18	HM	SW8270D
4,6-Dinitro-2-methylphenol	ND	360	ug/Kg	1	07/27/18	HM	SW8270D
4-Bromophenyl phenyl ether	ND	360	ug/Kg	1	07/27/18	HM	SW8270D
4-Chloro-3-methylphenol	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
4-Chloroaniline	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
4-Chlorophenyl phenyl ether	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
4-Nitroaniline	ND	570	ug/Kg	1	07/27/18	HM	SW8270D
4-Nitrophenol	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Acenaphthene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Acenaphthylene	770	250	ug/Kg	1	07/27/18	HM	SW8270D
Acetophenone	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Aniline	ND	360	ug/Kg	1	07/27/18	HM	SW8270D
Anthracene	990	250	ug/Kg	1	07/27/18	HM	SW8270D
Benz(a)anthracene	1700	250	ug/Kg	1	07/27/18	HM	SW8270D
Benzidine	ND	200	ug/Kg	1	07/27/18	HM	SW8270D
Benzo(a)pyrene	1300	250	ug/Kg	1	07/27/18	HM	SW8270D
Benzo(b)fluoranthene	1600	250	ug/Kg	1	07/27/18	HM	SW8270D
Benzo(ghi)perylene	1600	250	ug/Kg	1	07/27/18	HM	SW8270D
Benzo(k)fluoranthene	1500	250	ug/Kg	1	07/27/18	HM	SW8270D
Benzoic acid	ND	720	ug/Kg	1	07/27/18	HM	SW8270D
Benzyl butyl phthalate	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Bis(2-chloroethoxy)methane	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Bis(2-chloroethyl)ether	ND	360	ug/Kg	1	07/27/18	HM	SW8270D
Bis(2-chloroisopropyl)ether	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Bis(2-ethylhexyl)phthalate	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Carbazole	ND	360	ug/Kg	1	07/27/18	HM	SW8270D
Chrysene	2400	250	ug/Kg	1	07/27/18	HM	SW8270D
Dibenz(a,h)anthracene	360	250	ug/Kg	1	07/27/18	HM	SW8270D
Dibenzofuran	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Diethyl phthalate	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Dimethylphthalate	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Di-n-butylphthalate	ND	360	ug/Kg	1	07/27/18	HM	SW8270D
Di-n-octylphthalate	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Fluoranthene	3500	250	ug/Kg	1	07/27/18	HM	SW8270D

Project ID: ROCKVILLE MGP
Client ID: SB-28 (1-3 FT)

Phoenix I.D.: CA98809

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Fluorene	430	250	ug/Kg	1	07/27/18	HM	SW8270D
Hexachlorobenzene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Hexachlorobutadiene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Hexachlorocyclopentadiene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Hexachloroethane	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Indeno(1,2,3-cd)pyrene	1400	250	ug/Kg	1	07/27/18	HM	SW8270D
Isophorone	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Naphthalene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Nitrobenzene	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
N-Nitrosodimethylamine	ND	200	ug/Kg	1	07/27/18	HM	SW8270D
N-Nitrosodi-n-propylamine	ND	200	ug/Kg	1	07/27/18	HM	SW8270D
N-Nitrosodiphenylamine	ND	360	ug/Kg	1	07/27/18	HM	SW8270D
Pentachloronitrobenzene	ND	360	ug/Kg	1	07/27/18	HM	SW8270D
Pentachlorophenol	ND	360	ug/Kg	1	07/27/18	HM	SW8270D
Phenanthrene	4600	250	ug/Kg	1	07/27/18	HM	SW8270D
Phenol	ND	250	ug/Kg	1	07/27/18	HM	SW8270D
Pyrene	5200	250	ug/Kg	1	07/27/18	HM	SW8270D
Pyridine	ND	360	ug/Kg	1	07/27/18	HM	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	67		%	1	07/27/18	HM	30 - 130 %
% 2-Fluorobiphenyl	67		%	1	07/27/18	HM	30 - 130 %
% 2-Fluorophenol	55		%	1	07/27/18	HM	30 - 130 %
% Nitrobenzene-d5	62		%	1	07/27/18	HM	30 - 130 %
% Phenol-d5	63		%	1	07/27/18	HM	30 - 130 %
% Terphenyl-d14	65		%	1	07/27/18	HM	30 - 130 %
Field Extraction	Completed				07/26/18		SW5035A

Project ID: ROCKVILLE MGP
Client ID: SB-28 (1-3 FT)
Phoenix I.D.: CA98809

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

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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Semi-Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C12 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

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

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
August 17, 2018
Reviewed and Released by: Sarah Bell, Project Manager

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

Analysis Report

August 17, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		07/26/18	
Location Code:	TIGHE	Received by:	SW	07/26/18	16:14
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCA98805
Phoenix ID: CA98810

Project ID: ROCKVILLE MGP
Client ID: SB-28 (22-24 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	95		%		07/26/18	Q	SW846-%Solid
Total Cyanide (SW9010C Distill.)	6.55	0.48	mg/Kg	1	07/30/18	O/GD	SW9012B
Soil Extraction SVOA PAH	Completed				07/26/18	JJ/CKV	SW3545A
Extraction of CT ETPH	Completed				07/27/18	VS/VCK	SW3545A
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	260	mg/Kg	5	07/30/18	AW	CTETPH 8015D
Identification	ND		mg/Kg	5	07/30/18	AW	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	65		%	5	07/30/18	AW	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.4	ug/Kg	1	07/28/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
1,1-Dichloroethane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
1,1-Dichloroethene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
1,1-Dichloropropene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dibromoethane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dichloroethane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
1,2-Dichloropropane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C

Ver 2

Project ID: ROCKVILLE MGP
Client ID: SB-28 (22-24 FT)

Phoenix I.D.: CA98810

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3,5-Trimethylbenzene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
1,3-Dichloropropane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
2,2-Dichloropropane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
2-Chlorotoluene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
2-Hexanone	ND	28	ug/Kg	1	07/28/18	JLI	SW8260C
2-Isopropyltoluene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
4-Chlorotoluene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	28	ug/Kg	1	07/28/18	JLI	SW8260C
Acetone	ND	280	ug/Kg	1	07/28/18	JLI	SW8260C
Acrylonitrile	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Benzene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Bromobenzene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Bromochloromethane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Bromodichloromethane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Bromoform	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Bromomethane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Carbon Disulfide	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Carbon tetrachloride	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Chlorobenzene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Chloroethane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Chloroform	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Chloromethane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Dibromochloromethane	ND	3.4	ug/Kg	1	07/28/18	JLI	SW8260C
Dibromomethane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Dichlorodifluoromethane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Ethylbenzene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Hexachlorobutadiene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Isopropylbenzene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
m&p-Xylene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	34	ug/Kg	1	07/28/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	11	ug/Kg	1	07/28/18	JLI	SW8260C
Methylene chloride	ND	11	ug/Kg	1	07/28/18	JLI	SW8260C
Naphthalene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
n-Butylbenzene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
n-Propylbenzene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
o-Xylene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
p-Isopropyltoluene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
sec-Butylbenzene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Styrene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
tert-Butylbenzene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Tetrachloroethene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	11	ug/Kg	1	07/28/18	JLI	SW8260C
Toluene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Total Xylenes	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-28 (22-24 FT)

Phoenix I.D.: CA98810

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	11	ug/Kg	1	07/28/18	JLI	SW8260C
Trichloroethene	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Trichlorofluoromethane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
Vinyl chloride	ND	5.7	ug/Kg	1	07/28/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	106		%	1	07/28/18	JLI	70 - 130 %
% Bromofluorobenzene	90		%	1	07/28/18	JLI	70 - 130 %
% Dibromofluoromethane	111		%	1	07/28/18	JLI	70 - 130 %
% Toluene-d8	102		%	1	07/28/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	490	240	ug/Kg	1	07/27/18	HM	SW8270D
Acenaphthene	ND	240	ug/Kg	1	07/27/18	HM	SW8270D
Acenaphthylene	2200	240	ug/Kg	1	07/27/18	HM	SW8270D
Anthracene	370	240	ug/Kg	1	07/27/18	HM	SW8270D
Benz(a)anthracene	ND	240	ug/Kg	1	07/27/18	HM	SW8270D
Benzo(a)pyrene	830	240	ug/Kg	1	07/27/18	HM	SW8270D
Benzo(b)fluoranthene	380	240	ug/Kg	1	07/27/18	HM	SW8270D
Benzo(ghi)perylene	940	240	ug/Kg	1	07/27/18	HM	SW8270D
Benzo(k)fluoranthene	280	240	ug/Kg	1	07/27/18	HM	SW8270D
Chrysene	ND	240	ug/Kg	1	07/27/18	HM	SW8270D
Dibenz(a,h)anthracene	ND	240	ug/Kg	1	07/27/18	HM	SW8270D
Fluoranthene	370	240	ug/Kg	1	07/27/18	HM	SW8270D
Fluorene	ND	240	ug/Kg	1	07/27/18	HM	SW8270D
Indeno(1,2,3-cd)pyrene	910	240	ug/Kg	1	07/27/18	HM	SW8270D
Naphthalene	620	240	ug/Kg	1	07/27/18	HM	SW8270D
Phenanthrene	370	240	ug/Kg	1	07/27/18	HM	SW8270D
Pyrene	790	240	ug/Kg	1	07/27/18	HM	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	65		%	1	07/27/18	HM	30 - 130 %
% Nitrobenzene-d5	69		%	1	07/27/18	HM	30 - 130 %
% Terphenyl-d14	60		%	1	07/27/18	HM	30 - 130 %
Field Extraction	Completed				07/26/18		SW5035A

Project ID: ROCKVILLE MGP
Client ID: SB-28 (22-24 FT)
Phoenix I.D.: CA98810

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

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 there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
August 17, 2018
Reviewed and Released by: Sarah Bell, Project Manager

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

QA/QC Report

August 17, 2018

QA/QC Data

SDG I.D.: GCA98805

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 442012 (mg/L), QC Sample No: CA96215 (CA98805)														
ICP Metals - SPLP Extraction														
Antimony	BRL	0.005	<0.005	<0.005	NC	104			105			75 - 125	20	
Arsenic	BRL	0.004	<0.004	<0.004	NC	96.1			99.3			75 - 125	20	
Barium	BRL	0.010	0.035	0.035	NC	104			104			75 - 125	20	
Beryllium	BRL	0.001	<0.001	<0.001	NC	101			103			75 - 125	20	
Cadmium	BRL	0.005	<0.005	<0.005	NC	99.9			102			75 - 125	20	
Chromium	BRL	0.010	<0.010	<0.010	NC	99.3			99.1			75 - 125	20	
Copper	BRL	0.010	<0.010	<0.010	NC	102			103			75 - 125	20	
Lead	BRL	0.010	<0.010	<0.010	NC	99.3			99.4			75 - 125	20	
Nickel	BRL	0.010	<0.010	<0.010	NC	98.7			99.2			75 - 125	20	
Selenium	BRL	0.020	<0.020	<0.020	NC	99.1			100			75 - 125	20	
Silver	BRL	0.010	<0.010	<0.010	NC	98.9			99.8			75 - 125	20	
Thallium	BRL	0.005	<0.005	<0.005	NC	100			101			75 - 125	20	
Vanadium	BRL	0.010	<0.010	<0.010	NC	99.7			101			75 - 125	20	
Zinc	BRL	0.010	<0.010	<0.010	NC	101			102			75 - 125	20	
QA/QC Batch 442009 (mg/L), QC Sample No: CA98182 (CA98805)														
Mercury - Water	BRL	0.0002	<0.0002	<0.0002	NC	80.9			82.4			80 - 120	20	
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 440636 (mg/kg), QC Sample No: CA98508 (CA98805, CA98807, CA98809)														
Mercury - Soil	BRL	0.02	<0.02	<0.03	NC	92.8	94.5	1.8	98.5			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 440577 (mg/kg), QC Sample No: CA98999 (CA98805, CA98807, CA98809)														
ICP Metals - Soil														
Antimony	BRL	3.6	<3.7	2.4	NC	82.1			92.9			75 - 125	30	
Arsenic	BRL	0.71	5.48	6.48	16.7	89.8			94.3			75 - 125	30	
Barium	BRL	0.36	151	143	5.40	86.9			84.7			75 - 125	30	
Beryllium	BRL	0.29	0.47	0.36	NC	89.3			94.8			75 - 125	30	
Cadmium	BRL	0.36	<0.37	0.69	NC	84.5			89.4			75 - 125	30	
Chromium	BRL	0.36	17.0	27.7	47.9	92.2			94.9			75 - 125	30	r
Copper	BRL	0.8	29.3	45.4	43.1	87.6			99.5			75 - 125	30	r
Lead	BRL	0.36	318	338	6.10	89.2			85.1			75 - 125	30	
Nickel	BRL	0.36	14.1	23.7	50.8	87.1			91.5			75 - 125	30	r
Selenium	BRL	1.4	<1.5	<1.6	NC	101			81.1			75 - 125	30	
Silver	BRL	0.36	<0.37	<0.40	NC	92.6			100			75 - 125	30	
Thallium	BRL	3.2	<1.5	<3.6	NC	85.8			89.0			75 - 125	30	
Vanadium	BRL	0.36	24.4	21.1	14.5	97.2			95.4			75 - 125	30	
Zinc	BRL	0.8	139	127	9.00	87.8			85.9			75 - 125	30	

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

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QA/QC Report

August 17, 2018

QA/QC Data

SDG I.D.: GCA98805

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 440581 (mg/Kg), QC Sample No: CA98176 50X (CA98805)													
Total Cyanide (SW9010C Distill.)	BRL	0.50	<0.53	<0.53	NC	87.8			100			80 - 120	30
Comment:													
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils													
QA/QC Batch 441746 (mg/Kg), QC Sample No: CA98806 50X (CA98806)													
Total Cyanide (SW9010C Distill.)	BRL	0.50	<0.52	<0.52	NC	92.2			91.5			80 - 120	30
Comment:													
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils													
QA/QC Batch 440745 (mg/Kg), QC Sample No: CA99405 50X (CA98807, CA98808, CA98809, CA98810)													
Total Cyanide (SW9010C Distill.)	BRL	0.50	<0.55	<0.55	NC	95.4			102			80 - 120	30
Comment:													
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils													

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QA/QC Report

August 17, 2018

QA/QC Data

SDG I.D.: GCA98805

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 440642 (mg/Kg), QC Sample No: CA98514 (CA98806, CA98807, CA98808)										
TPH by GC (Extractable Products) - Soil										
Ext. Petroleum H.C. (C9-C36)	ND	50	86	90	4.5	97	90	7.5	60 - 120	30
% n-Pentacosane	54	%	72	77	6.7	86	80	7.2	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 440582 (ug/kg), QC Sample No: CA98597 (CA98805, CA98808, CA98810)										
Polynuclear Aromatic HC - Soil										
2-Methylnaphthalene	ND	230	63	53	17.2	54	67	21.5	30 - 130	30
Acenaphthene	ND	230	77	64	18.4	63	80	23.8	30 - 130	30
Acenaphthylene	ND	230	63	53	17.2	52	65	22.2	30 - 130	30
Anthracene	ND	230	67	56	17.9	55	69	22.6	30 - 130	30
Benz(a)anthracene	ND	230	77	64	18.4	62	79	24.1	30 - 130	30
Benzo(a)pyrene	ND	230	65	54	18.5	51	65	24.1	30 - 130	30
Benzo(b)fluoranthene	ND	230	68	56	19.4	54	70	25.8	30 - 130	30
Benzo(ghi)perylene	ND	230	63	54	15.4	46	55	17.8	30 - 130	30
Benzo(k)fluoranthene	ND	230	69	58	17.3	56	69	20.8	30 - 130	30
Chrysene	ND	230	78	65	18.2	63	81	25.0	30 - 130	30
Dibenz(a,h)anthracene	ND	230	69	58	17.3	53	62	15.7	30 - 130	30
Fluoranthene	ND	230	66	56	16.4	57	70	20.5	30 - 130	30
Fluorene	ND	230	66	55	18.2	56	70	22.2	30 - 130	30
Indeno(1,2,3-cd)pyrene	ND	230	64	55	15.1	48	57	17.1	30 - 130	30
Naphthalene	ND	230	63	52	19.1	53	65	20.3	30 - 130	30
Phenanthrene	ND	230	66	55	18.2	54	68	23.0	30 - 130	30
Pyrene	ND	230	65	56	14.9	58	71	20.2	30 - 130	30
% 2-Fluorobiphenyl	45	%	59	49	18.5	46	58	23.1	30 - 130	30
% Nitrobenzene-d5	42	%	58	49	16.8	52	67	25.2	30 - 130	30
% Terphenyl-d14	44	%	60	51	16.2	51	61	17.9	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%)										
QA/QC Batch 440931 (ug/kg), QC Sample No: CA98808 (CA98807 (50X) , CA98808, CA98809 (50X))										
Volatiles - Soil										
1,1,1,2-Tetrachloroethane	ND	5.0	100	99	1.0	100	102	2.0	70 - 130	30
1,1,1-Trichloroethane	ND	5.0	103	99	4.0	104	103	1.0	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	3.0	110	108	1.8	119	121	1.7	70 - 130	30
1,1,2-Trichloroethane	ND	5.0	101	101	0.0	106	108	1.9	70 - 130	30
1,1-Dichloroethane	ND	5.0	105	99	5.9	112	110	1.8	70 - 130	30
1,1-Dichloroethene	ND	5.0	106	102	3.8	89	94	5.5	70 - 130	30
1,1-Dichloropropene	ND	5.0	108	108	0.0	115	116	0.9	70 - 130	30
1,2,3-Trichlorobenzene	ND	5.0	102	102	0.0	94	106	12.0	70 - 130	30

QA/QC Data

SDG I.D.: GCA98805

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2,3-Trichloropropane	ND	5.0	103	101	2.0	110	112	1.8	70 - 130	30
1,2,4-Trichlorobenzene	ND	5.0	104	103	1.0	96	108	11.8	70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	107	106	0.9	110	113	2.7	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	5.0	109	105	3.7	106	116	9.0	70 - 130	30
1,2-Dibromoethane	ND	5.0	102	100	2.0	104	107	2.8	70 - 130	30
1,2-Dichlorobenzene	ND	5.0	101	99	2.0	106	109	2.8	70 - 130	30
1,2-Dichloroethane	ND	5.0	99	97	2.0	104	105	1.0	70 - 130	30
1,2-Dichloropropane	ND	5.0	104	104	0.0	112	114	1.8	70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	108	107	0.9	110	113	2.7	70 - 130	30
1,3-Dichlorobenzene	ND	5.0	100	100	0.0	104	107	2.8	70 - 130	30
1,3-Dichloropropane	ND	5.0	100	98	2.0	106	108	1.9	70 - 130	30
1,4-Dichlorobenzene	ND	5.0	98	97	1.0	103	105	1.9	70 - 130	30
2,2-Dichloropropane	ND	5.0	110	106	3.7	103	103	0.0	70 - 130	30
2-Chlorotoluene	ND	5.0	105	103	1.9	110	113	2.7	70 - 130	30
2-Hexanone	ND	25	99	95	4.1	106	106	0.0	70 - 130	30
2-Isopropyltoluene	ND	5.0	113	112	0.9	115	119	3.4	70 - 130	30
4-Chlorotoluene	ND	5.0	101	101	0.0	108	110	1.8	70 - 130	30
4-Methyl-2-pentanone	ND	25	103	101	2.0	109	110	0.9	70 - 130	30
Acetone	ND	10	85	76	11.2	89	85	4.6	70 - 130	30
Acrylonitrile	ND	5.0	104	97	7.0	112	110	1.8	70 - 130	30
Benzene	ND	1.0	104	103	1.0	112	114	1.8	70 - 130	30
Bromobenzene	ND	5.0	104	103	1.0	107	110	2.8	70 - 130	30
Bromochloromethane	ND	5.0	105	98	6.9	110	109	0.9	70 - 130	30
Bromodichloromethane	ND	5.0	104	101	2.9	101	104	2.9	70 - 130	30
Bromoform	ND	5.0	103	98	5.0	94	97	3.1	70 - 130	30
Bromomethane	ND	5.0	100	95	5.1	116	92	23.1	70 - 130	30
Carbon Disulfide	ND	5.0	112	108	3.6	87	93	6.7	70 - 130	30
Carbon tetrachloride	ND	5.0	103	100	3.0	98	97	1.0	70 - 130	30
Chlorobenzene	ND	5.0	99	97	2.0	104	107	2.8	70 - 130	30
Chloroethane	ND	5.0	106	102	3.8	121	94	25.1	70 - 130	30
Chloroform	ND	5.0	101	96	5.1	107	105	1.9	70 - 130	30
Chloromethane	ND	5.0	93	90	3.3	103	97	6.0	70 - 130	30
cis-1,2-Dichloroethene	ND	5.0	108	104	3.8	115	113	1.8	70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	110	109	0.9	110	114	3.6	70 - 130	30
Dibromochloromethane	ND	3.0	107	105	1.9	101	104	2.9	70 - 130	30
Dibromomethane	ND	5.0	102	101	1.0	107	107	0.0	70 - 130	30
Dichlorodifluoromethane	ND	5.0	98	96	2.1	105	106	0.9	70 - 130	30
Ethylbenzene	ND	1.0	105	102	2.9	109	111	1.8	70 - 130	30
Hexachlorobutadiene	ND	5.0	101	102	1.0	96	104	8.0	70 - 130	30
Isopropylbenzene	ND	1.0	111	111	0.0	115	119	3.4	70 - 130	30
m&p-Xylene	ND	2.0	102	100	2.0	107	110	2.8	70 - 130	30
Methyl ethyl ketone	ND	5.0	95	86	9.9	104	102	1.9	70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	95	91	4.3	99	102	3.0	70 - 130	30
Methylene chloride	ND	5.0	89	85	4.6	95	94	1.1	70 - 130	30
Naphthalene	ND	5.0	114	113	0.9	112	121	7.7	70 - 130	30
n-Butylbenzene	ND	1.0	107	107	0.0	106	114	7.3	70 - 130	30
n-Propylbenzene	ND	1.0	107	106	0.9	112	114	1.8	70 - 130	30
o-Xylene	ND	2.0	108	106	1.9	112	115	2.6	70 - 130	30
p-Isopropyltoluene	ND	1.0	110	110	0.0	112	117	4.4	70 - 130	30
sec-Butylbenzene	ND	1.0	112	111	0.9	114	118	3.4	70 - 130	30
Styrene	ND	5.0	109	106	2.8	112	115	2.6	70 - 130	30
tert-Butylbenzene	ND	1.0	111	108	2.7	113	116	2.6	70 - 130	30
Tetrachloroethene	ND	5.0	101	102	1.0	106	107	0.9	70 - 130	30

QA/QC Data

SDG I.D.: GCA98805

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Tetrahydrofuran (THF)	ND	5.0	107	102	4.8	118	115	2.6	70 - 130	30
Toluene	ND	1.0	103	104	1.0	110	111	0.9	70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	108	103	4.7	112	112	0.0	70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	103	103	0.0	101	105	3.9	70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	118	116	1.7	115	118	2.6	70 - 130	30
Trichloroethene	ND	5.0	104	103	1.0	109	110	0.9	70 - 130	30
Trichlorofluoromethane	ND	5.0	95	92	3.2	99	75	27.6	70 - 130	30
Trichlorotrifluoroethane	ND	5.0	103	99	4.0	85	95	11.1	70 - 130	30
Vinyl chloride	ND	5.0	106	103	2.9	128	126	1.6	70 - 130	30
% 1,2-dichlorobenzene-d4	103	%	102	99	3.0	101	100	1.0	70 - 130	30
% Bromofluorobenzene	92	%	98	97	1.0	95	98	3.1	70 - 130	30
% Dibromofluoromethane	103	%	97	101	4.0	96	94	2.1	70 - 130	30
% Toluene-d8	102	%	102	103	1.0	102	103	1.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 440542 (ug/Kg), QC Sample No: CA99028 2X (CA98809)

Polychlorinated Biphenyls - Soil

PCB-1016	ND	33	78	92	16.5	82	89	8.2	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	90	105	15.4	88	95	7.7	40 - 140	30
PCB-1262	ND	33							40 - 140	30
PCB-1268	ND	33							40 - 140	30
% DCBP (Surrogate Rec)	90	%	92	110	17.8	87	96	9.8	30 - 150	30
% TCMX (Surrogate Rec)	85	%	83	100	18.6	82	92	11.5	30 - 150	30

QA/QC Batch 440584 (ug/kg), QC Sample No: CA99033 (CA98807, CA98809)

Semivolatiles - Soil

1,2,4,5-Tetrachlorobenzene	ND	230	66	62	6.3	62	56	10.2	30 - 130	30
1,2,4-Trichlorobenzene	ND	230	64	63	1.6	63	57	10.0	30 - 130	30
1,2-Dichlorobenzene	ND	180	60	59	1.7	58	52	10.9	30 - 130	30
1,2-Diphenylhydrazine	ND	230	70	66	5.9	67	61	9.4	30 - 130	30
1,3-Dichlorobenzene	ND	230	58	58	0.0	56	49	13.3	30 - 130	30
1,4-Dichlorobenzene	ND	230	58	58	0.0	56	50	11.3	30 - 130	30
2,4,5-Trichlorophenol	ND	230	80	77	3.8	73	68	7.1	30 - 130	30
2,4,6-Trichlorophenol	ND	130	79	74	6.5	73	67	8.6	30 - 130	30
2,4-Dichlorophenol	ND	130	75	71	5.5	69	63	9.1	30 - 130	30
2,4-Dimethylphenol	ND	230	81	76	6.4	65	58	11.4	30 - 130	30
2,4-Dinitrophenol	ND	230	12	<10	NC	31	42	30.1	30 - 130	30
2,4-Dinitrotoluene	ND	130	78	74	5.3	77	71	8.1	30 - 130	30
2,6-Dinitrotoluene	ND	130	79	74	6.5	76	70	8.2	30 - 130	30
2-Chloronaphthalene	ND	230	75	72	4.1	70	64	9.0	30 - 130	30
2-Chlorophenol	ND	230	69	68	1.5	66	61	7.9	30 - 130	30
2-Methylnaphthalene	ND	230	68	64	6.1	64	59	8.1	30 - 130	30
2-Methylphenol (o-cresol)	ND	230	73	70	4.2	65	60	8.0	30 - 130	30
2-Nitroaniline	ND	330	117	109	7.1	106	97	8.9	30 - 130	30
2-Nitrophenol	ND	230	74	72	2.7	73	66	10.1	30 - 130	30
3&4-Methylphenol (m&p-cresol)	ND	230	77	74	4.0	69	62	10.7	30 - 130	30
3,3'-Dichlorobenzidine	ND	130	80	73	9.2	71	73	2.8	30 - 130	30

QA/QC Data

SDG I.D.: GCA98805

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
3-Nitroaniline	ND	330	97	90	7.5	93	86	7.8	30 - 130	30	
4,6-Dinitro-2-methylphenol	ND	230	31	23	29.6	51	56	9.3	30 - 130	30	l
4-Bromophenyl phenyl ether	ND	230	77	72	6.7	73	68	7.1	30 - 130	30	
4-Chloro-3-methylphenol	ND	230	81	75	7.7	75	70	6.9	30 - 130	30	
4-Chloroaniline	ND	230	74	73	1.4	70	65	7.4	30 - 130	30	
4-Chlorophenyl phenyl ether	ND	230	78	73	6.6	75	67	11.3	30 - 130	30	
4-Nitroaniline	ND	230	82	78	5.0	77	71	8.1	30 - 130	30	
4-Nitrophenol	ND	230	85	78	8.6	77	72	6.7	30 - 130	30	
Acenaphthene	ND	230	79	74	6.5	75	69	8.3	30 - 130	30	
Acenaphthylene	ND	130	74	69	7.0	68	62	9.2	30 - 130	30	
Acetophenone	ND	230	62	60	3.3	60	55	8.7	30 - 130	30	
Aniline	ND	330	55	54	1.8	42	36	15.4	30 - 130	30	
Anthracene	ND	230	79	74	6.5	73	69	5.6	30 - 130	30	
Benz(a)anthracene	ND	230	79	73	7.9	73	67	8.6	30 - 130	30	
Benzidine	ND	330	56	50	11.3	16	15	6.5	30 - 130	30	m
Benzo(a)pyrene	ND	130	74	69	7.0	69	63	9.1	30 - 130	30	
Benzo(b)fluoranthene	ND	160	79	74	6.5	75	67	11.3	30 - 130	30	
Benzo(ghi)perylene	ND	230	76	70	8.2	70	64	9.0	30 - 130	30	
Benzo(k)fluoranthene	ND	230	81	78	3.8	74	70	5.6	30 - 130	30	
Benzoic Acid	ND	330	<10	<10	NC	46	38	19.0	30 - 130	30	l
Benzyl butyl phthalate	ND	230	81	75	7.7	77	71	8.1	30 - 130	30	
Bis(2-chloroethoxy)methane	ND	230	74	70	5.6	70	64	9.0	30 - 130	30	
Bis(2-chloroethyl)ether	ND	130	60	59	1.7	64	59	8.1	30 - 130	30	
Bis(2-chloroisopropyl)ether	ND	230	60	58	3.4	58	53	9.0	30 - 130	30	
Bis(2-ethylhexyl)phthalate	ND	230	87	81	7.1	81	74	9.0	30 - 130	30	
Carbazole	ND	230	79	74	6.5	73	67	8.6	30 - 130	30	
Chrysene	ND	230	81	74	9.0	74	68	8.5	30 - 130	30	
Dibenz(a,h)anthracene	ND	130	81	74	9.0	75	67	11.3	30 - 130	30	
Dibenzofuran	ND	230	76	71	6.8	69	63	9.1	30 - 130	30	
Diethyl phthalate	ND	230	79	73	7.9	74	67	9.9	30 - 130	30	
Dimethylphthalate	ND	230	80	74	7.8	74	67	9.9	30 - 130	30	
Di-n-butylphthalate	ND	670	86	81	6.0	78	72	8.0	30 - 130	30	
Di-n-octylphthalate	ND	230	84	77	8.7	80	72	10.5	30 - 130	30	
Fluoranthene	ND	230	80	75	6.5	74	69	7.0	30 - 130	30	
Fluorene	ND	230	77	74	4.0	73	67	8.6	30 - 130	30	
Hexachlorobenzene	ND	130	80	75	6.5	74	67	9.9	30 - 130	30	
Hexachlorobutadiene	ND	230	65	62	4.7	62	55	12.0	30 - 130	30	
Hexachlorocyclopentadiene	ND	230	59	57	3.4	58	52	10.9	30 - 130	30	
Hexachloroethane	ND	130	58	57	1.7	55	49	11.5	30 - 130	30	
Indeno(1,2,3-cd)pyrene	ND	230	75	70	6.9	71	64	10.4	30 - 130	30	
Isophorone	ND	130	67	63	6.2	63	58	8.3	30 - 130	30	
Naphthalene	ND	230	66	65	1.5	64	59	8.1	30 - 130	30	
Nitrobenzene	ND	130	68	69	1.5	69	64	7.5	30 - 130	30	
N-Nitrosodimethylamine	ND	230	59	60	1.7	61	57	6.8	30 - 130	30	
N-Nitrosodi-n-propylamine	ND	130	74	72	2.7	71	66	7.3	30 - 130	30	
N-Nitrosodiphenylamine	ND	130	80	74	7.8	70	63	10.5	30 - 130	30	
Pentachloronitrobenzene	ND	230	73	68	7.1	66	63	4.7	30 - 130	30	
Pentachlorophenol	ND	230	67	61	9.4	66	61	7.9	30 - 130	30	
Phenanthrene	ND	130	78	72	8.0	73	66	10.1	30 - 130	30	
Phenol	ND	230	73	72	1.4	68	62	9.2	30 - 130	30	
Pyrene	ND	230	82	76	7.6	76	70	8.2	30 - 130	30	
Pyridine	ND	230	40	41	2.5	42	38	10.0	30 - 130	30	
% 2,4,6-Tribromophenol	66	%	77	73	5.3	69	65	6.0	30 - 130	30	

QA/QC Data

SDG I.D.: GCA98805

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% 2-Fluorobiphenyl	66	%	68	65	4.5	63	57	10.0	30 - 130	30
% 2-Fluorophenol	56	%	63	62	1.6	60	56	6.9	30 - 130	30
% Nitrobenzene-d5	58	%	61	60	1.7	60	57	5.1	30 - 130	30
% Phenol-d5	63	%	71	68	4.3	65	61	6.3	30 - 130	30
% Terphenyl-d14	70	%	73	68	7.1	68	63	7.6	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%)

QA/QC Batch 440643 (mg/Kg), QC Sample No: CA99145 (CA98809, CA98810)

TPH by GC (Extractable Products) - Soil

Ext. Petroleum H.C. (C9-C36)	ND	50	67	63	6.2	75	72	4.1	60 - 120	30
% n-Pentacosane	68	%	73	67	8.6	76	78	2.6	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 440922 (ug/kg), QC Sample No: CA99355 (CA98807, CA98809, CA98810)

Volatiles - Soil

1,1,1,2-Tetrachloroethane	ND	5.0	111	102	8.5	100	95	5.1	70 - 130	30
1,1,1-Trichloroethane	ND	5.0	113	100	12.2	102	97	5.0	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	3.0	112	101	10.3	108	104	3.8	70 - 130	30
1,1,2-Trichloroethane	ND	5.0	110	98	11.5	99	96	3.1	70 - 130	30
1,1-Dichloroethane	ND	5.0	106	96	9.9	106	100	5.8	70 - 130	30
1,1-Dichloroethene	ND	5.0	119	106	11.6	96	93	3.2	70 - 130	30
1,1-Dichloropropene	ND	5.0	121	107	12.3	108	107	0.9	70 - 130	30
1,2,3-Trichlorobenzene	ND	5.0	110	101	8.5	104	100	3.9	70 - 130	30
1,2,3-Trichloropropane	ND	5.0	106	95	10.9	103	99	4.0	70 - 130	30
1,2,4-Trichlorobenzene	ND	5.0	113	103	9.3	105	102	2.9	70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	117	105	10.8	109	105	3.7	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	5.0	112	101	10.3	105	100	4.9	70 - 130	30
1,2-Dibromoethane	ND	5.0	111	101	9.4	102	94	8.2	70 - 130	30
1,2-Dichlorobenzene	ND	5.0	109	98	10.6	103	99	4.0	70 - 130	30
1,2-Dichloroethane	ND	5.0	107	94	12.9	98	94	4.2	70 - 130	30
1,2-Dichloropropane	ND	5.0	112	98	13.3	105	102	2.9	70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	118	106	10.7	109	105	3.7	70 - 130	30
1,3-Dichlorobenzene	ND	5.0	109	99	9.6	102	99	3.0	70 - 130	30
1,3-Dichloropropane	ND	5.0	107	98	8.8	103	96	7.0	70 - 130	30
1,4-Dichlorobenzene	ND	5.0	106	97	8.9	100	96	4.1	70 - 130	30
2,2-Dichloropropane	ND	5.0	119	106	11.6	102	97	5.0	70 - 130	30
2-Chlorotoluene	ND	5.0	113	102	10.2	107	104	2.8	70 - 130	30
2-Hexanone	ND	25	95	85	11.1	92	88	4.4	70 - 130	30
2-Isopropyltoluene	ND	5.0	125	112	11.0	115	111	3.5	70 - 130	30
4-Chlorotoluene	ND	5.0	110	98	11.5	105	101	3.9	70 - 130	30
4-Methyl-2-pentanone	ND	25	99	88	11.8	96	94	2.1	70 - 130	30
Acetone	ND	10	76	65	15.6	84	75	11.3	70 - 130	30
Acrylonitrile	ND	5.0	97	87	10.9	103	95	8.1	70 - 130	30
Benzene	ND	1.0	114	101	12.1	105	103	1.9	70 - 130	30
Bromobenzene	ND	5.0	114	102	11.1	105	101	3.9	70 - 130	30
Bromochloromethane	ND	5.0	109	97	11.7	102	97	5.0	70 - 130	30
Bromodichloromethane	ND	5.0	113	101	11.2	99	96	3.1	70 - 130	30
Bromoform	ND	5.0	112	101	10.3	95	90	5.4	70 - 130	30
Bromomethane	ND	5.0	115	103	11.0	87	79	9.6	70 - 130	30
Carbon Disulfide	ND	5.0	122	109	11.3	97	97	0.0	70 - 130	30

QA/QC Data

SDG I.D.: GCA98805

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Carbon tetrachloride	ND	5.0	114	100	13.1	97	95	2.1	70 - 130	30
Chlorobenzene	ND	5.0	109	99	9.6	101	97	4.0	70 - 130	30
Chloroethane	ND	5.0	114	99	14.1	94	88	6.6	70 - 130	30
Chloroform	ND	5.0	106	95	10.9	102	96	6.1	70 - 130	30
Chloromethane	ND	5.0	93	81	13.8	97	92	5.3	70 - 130	30
cis-1,2-Dichloroethene	ND	5.0	112	100	11.3	107	102	4.8	70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	120	106	12.4	103	101	2.0	70 - 130	30
Dibromochloromethane	ND	3.0	119	108	9.7	103	96	7.0	70 - 130	30
Dibromomethane	ND	5.0	109	98	10.6	100	96	4.1	70 - 130	30
Dichlorodifluoromethane	ND	5.0	118	103	13.6	107	104	2.8	70 - 130	30
Ethylbenzene	ND	1.0	114	103	10.1	106	101	4.8	70 - 130	30
Hexachlorobutadiene	ND	5.0	118	105	11.7	106	101	4.8	70 - 130	30
Isopropylbenzene	ND	1.0	121	109	10.4	113	108	4.5	70 - 130	30
m&p-Xylene	ND	2.0	113	102	10.2	104	100	3.9	70 - 130	30
Methyl ethyl ketone	ND	5.0	84	74	12.7	89	82	8.2	70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	102	91	11.4	95	90	5.4	70 - 130	30
Methylene chloride	ND	5.0	97	86	12.0	90	88	2.2	70 - 130	30
Naphthalene	ND	5.0	122	110	10.3	114	110	3.6	70 - 130	30
n-Butylbenzene	ND	1.0	118	105	11.7	111	108	2.7	70 - 130	30
n-Propylbenzene	ND	1.0	118	105	11.7	109	107	1.9	70 - 130	30
o-Xylene	ND	2.0	120	107	11.5	110	104	5.6	70 - 130	30
p-Isopropyltoluene	ND	1.0	122	110	10.3	112	109	2.7	70 - 130	30
sec-Butylbenzene	ND	1.0	123	110	11.2	114	110	3.6	70 - 130	30
Styrene	ND	5.0	119	107	10.6	110	104	5.6	70 - 130	30
tert-Butylbenzene	ND	1.0	123	109	12.1	111	107	3.7	70 - 130	30
Tetrachloroethene	ND	5.0	118	103	13.6	102	99	3.0	70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	97	86	12.0	106	97	8.9	70 - 130	30
Toluene	ND	1.0	114	101	12.1	104	102	1.9	70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	120	107	11.5	105	103	1.9	70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	112	99	12.3	95	93	2.1	70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	120	106	12.4	102	97	5.0	70 - 130	30
Trichloroethene	ND	5.0	118	104	12.6	102	101	1.0	70 - 130	30
Trichlorofluoromethane	ND	5.0	105	92	13.2	90	87	3.4	70 - 130	30
Trichlorotrifluoroethane	ND	5.0	121	105	14.2	96	93	3.2	70 - 130	30
Vinyl chloride	ND	5.0	111	99	11.4	116	111	4.4	70 - 130	30
% 1,2-dichlorobenzene-d4	103	%	99	100	1.0	102	100	2.0	70 - 130	30
% Bromofluorobenzene	93	%	99	99	0.0	99	97	2.0	70 - 130	30
% Dibromofluoromethane	103	%	99	98	1.0	99	98	1.0	70 - 130	30
% Toluene-d8	102	%	102	102	0.0	100	101	1.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 441070 (ug/kg), QC Sample No: CB00642 (CA98806 (50X))

Volatiles - Soil

1,1,1,2-Tetrachloroethane	ND	5.0	103	101	2.0	94	92	2.2	70 - 130	30
1,1,1-Trichloroethane	ND	5.0	99	96	3.1	89	90	1.1	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	3.0	98	99	1.0	96	95	1.0	70 - 130	30
1,1,2-Trichloroethane	ND	5.0	96	99	3.1	90	91	1.1	70 - 130	30
1,1-Dichloroethane	ND	5.0	99	99	0.0	94	94	0.0	70 - 130	30
1,1-Dichloroethene	ND	5.0	101	98	3.0	86	86	0.0	70 - 130	30
1,1-Dichloropropene	ND	5.0	99	96	3.1	94	93	1.1	70 - 130	30
1,2,3-Trichlorobenzene	ND	5.0	87	90	3.4	96	94	2.1	70 - 130	30
1,2,3-Trichloropropane	ND	5.0	97	96	1.0	91	89	2.2	70 - 130	30

QA/QC Data

SDG I.D.: GCA98805

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,2,4-Trichlorobenzene	ND	5.0	80	83	3.7	92	85	7.9	70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	93	91	2.2	96	91	5.3	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	103	108	4.7	114	101	12.1	70 - 130	30	
1,2-Dibromoethane	ND	5.0	97	99	2.0	92	91	1.1	70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	91	90	1.1	92	89	3.3	70 - 130	30	
1,2-Dichloroethane	ND	5.0	101	100	1.0	95	96	1.0	70 - 130	30	
1,2-Dichloropropane	ND	5.0	98	97	1.0	95	94	1.1	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	93	90	3.3	95	91	4.3	70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	90	90	0.0	92	89	3.3	70 - 130	30	
1,3-Dichloropropane	ND	5.0	98	93	5.2	92	90	2.2	70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	87	87	0.0	88	86	2.3	70 - 130	30	
2,2-Dichloropropane	ND	5.0	99	97	2.0	89	87	2.3	70 - 130	30	
2-Chlorotoluene	ND	5.0	93	90	3.3	94	90	4.3	70 - 130	30	
2-Hexanone	ND	25	89	91	2.2	79	79	0.0	70 - 130	30	
2-Isopropyltoluene	ND	5.0	100	96	4.1	101	97	4.0	70 - 130	30	
4-Chlorotoluene	ND	5.0	89	88	1.1	92	87	5.6	70 - 130	30	
4-Methyl-2-pentanone	ND	25	96	98	2.1	89	89	0.0	70 - 130	30	
Acetone	ND	10	74	79	6.5	63	70	10.5	70 - 130	30	m
Acrylonitrile	ND	5.0	104	109	4.7	98	98	0.0	70 - 130	30	
Benzene	ND	1.0	98	95	3.1	94	93	1.1	70 - 130	30	
Bromobenzene	ND	5.0	95	95	0.0	95	92	3.2	70 - 130	30	
Bromochloromethane	ND	5.0	97	96	1.0	90	88	2.2	70 - 130	30	
Bromodichloromethane	ND	5.0	101	101	0.0	91	92	1.1	70 - 130	30	
Bromoform	ND	5.0	108	108	0.0	87	86	1.2	70 - 130	30	
Bromomethane	ND	5.0	92	88	4.4	91	87	4.5	70 - 130	30	
Carbon Disulfide	ND	5.0	107	102	4.8	89	88	1.1	70 - 130	30	
Carbon tetrachloride	ND	5.0	100	98	2.0	88	87	1.1	70 - 130	30	
Chlorobenzene	ND	5.0	96	93	3.2	92	90	2.2	70 - 130	30	
Chloroethane	ND	5.0	101	96	5.1	95	92	3.2	70 - 130	30	
Chloroform	ND	5.0	95	94	1.1	89	89	0.0	70 - 130	30	
Chloromethane	ND	5.0	94	92	2.2	88	88	0.0	70 - 130	30	
cis-1,2-Dichloroethene	ND	5.0	96	96	0.0	92	90	2.2	70 - 130	30	
cis-1,3-Dichloropropene	ND	5.0	101	100	1.0	91	92	1.1	70 - 130	30	
Dibromochloromethane	ND	3.0	107	106	0.9	92	93	1.1	70 - 130	30	
Dibromomethane	ND	5.0	99	99	0.0	93	92	1.1	70 - 130	30	
Dichlorodifluoromethane	ND	5.0	96	95	1.0	89	87	2.3	70 - 130	30	
Ethylbenzene	ND	1.0	98	94	4.2	95	93	2.1	70 - 130	30	
Hexachlorobutadiene	ND	5.0	88	85	3.5	91	89	2.2	70 - 130	30	
Isopropylbenzene	ND	1.0	93	90	3.3	94	91	3.2	70 - 130	30	
m&p-Xylene	ND	2.0	94	91	3.2	92	90	2.2	70 - 130	30	
Methyl ethyl ketone	ND	5.0	91	92	1.1	82	78	5.0	70 - 130	30	
Methyl t-butyl ether (MTBE)	ND	1.0	90	92	2.2	84	82	2.4	70 - 130	30	
Methylene chloride	ND	5.0	95	91	4.3	84	83	1.2	70 - 130	30	
Naphthalene	ND	5.0	98	103	5.0	110	105	4.7	70 - 130	30	
n-Butylbenzene	ND	1.0	92	91	1.1	96	92	4.3	70 - 130	30	
n-Propylbenzene	ND	1.0	92	90	2.2	92	90	2.2	70 - 130	30	
o-Xylene	ND	2.0	98	95	3.1	97	95	2.1	70 - 130	30	
p-Isopropyltoluene	ND	1.0	94	91	3.2	96	93	3.2	70 - 130	30	
sec-Butylbenzene	ND	1.0	97	94	3.1	98	95	3.1	70 - 130	30	
Styrene	ND	5.0	97	95	2.1	95	92	3.2	70 - 130	30	
tert-Butylbenzene	ND	1.0	96	93	3.2	97	93	4.2	70 - 130	30	
Tetrachloroethene	ND	5.0	97	95	2.1	94	94	0.0	70 - 130	30	
Tetrahydrofuran (THF)	ND	5.0	93	98	5.2	86	86	0.0	70 - 130	30	

QA/QC Data

SDG I.D.: GCA98805

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Toluene	ND	1.0	101	100	1.0	96	95	1.0	70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	108	94	13.9	94	95	1.1	70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	95	96	1.0	88	88	0.0	70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	102	105	2.9	88	89	1.1	70 - 130	30
Trichloroethene	ND	5.0	100	98	2.0	95	94	1.1	70 - 130	30
Trichlorofluoromethane	ND	5.0	94	90	4.3	89	85	4.6	70 - 130	30
Trichlorotrifluoroethane	ND	5.0	101	97	4.0	90	88	2.2	70 - 130	30
Vinyl chloride	ND	5.0	98	95	3.1	85	84	1.2	70 - 130	30
% 1,2-dichlorobenzene-d4	98	%	100	101	1.0	101	100	1.0	70 - 130	30
% Bromofluorobenzene	96	%	103	102	1.0	102	102	0.0	70 - 130	30
% Dibromofluoromethane	95	%	101	102	1.0	93	93	0.0	70 - 130	30
% Toluene-d8	95	%	102	103	1.0	100	103	3.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 441636 (ug/kg), QC Sample No: CB04593 (CA98806)

Polynuclear Aromatic HC - Soil

2-Methylnaphthalene	ND	230	62	61	1.6	58	64	9.8	30 - 130	30
Acenaphthene	ND	230	66	67	1.5	62	70	12.1	30 - 130	30
Acenaphthylene	ND	230	62	63	1.6	59	66	11.2	30 - 130	30
Anthracene	ND	230	69	68	1.5	65	72	10.2	30 - 130	30
Benz(a)anthracene	ND	230	69	69	0.0	66	73	10.1	30 - 130	30
Benzo(a)pyrene	ND	230	66	65	1.5	63	70	10.5	30 - 130	30
Benzo(b)fluoranthene	ND	230	70	69	1.4	65	73	11.6	30 - 130	30
Benzo(ghi)perylene	ND	230	64	62	3.2	59	66	11.2	30 - 130	30
Benzo(k)fluoranthene	ND	230	70	69	1.4	65	72	10.2	30 - 130	30
Chrysene	ND	230	66	65	1.5	62	67	7.8	30 - 130	30
Dibenz(a,h)anthracene	ND	230	66	65	1.5	61	69	12.3	30 - 130	30
Fluoranthene	ND	230	71	71	0.0	67	76	12.6	30 - 130	30
Fluorene	ND	230	67	68	1.5	64	72	11.8	30 - 130	30
Indeno(1,2,3-cd)pyrene	ND	230	59	58	1.7	56	62	10.2	30 - 130	30
Naphthalene	ND	230	61	59	3.3	57	63	10.0	30 - 130	30
Phenanthrene	ND	230	64	64	0.0	60	67	11.0	30 - 130	30
Pyrene	ND	230	70	71	1.4	68	76	11.1	30 - 130	30
% 2-Fluorobiphenyl	56	%	56	57	1.8	54	60	10.5	30 - 130	30
% Nitrobenzene-d5	41	%	44	48	8.7	45	57	23.5	30 - 130	30
% Terphenyl-d14	60	%	62	62	0.0	60	66	9.5	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%)

QA/QC Batch 441761 (ug/Kg), QC Sample No: CB04784 2X (CA98805)

Pesticides - Soil

4,4' -DDD	ND	1.7	73	81	10.4	63	59	6.6	40 - 140	30
4,4' -DDE	ND	1.7	73	78	6.6	64	61	4.8	40 - 140	30
4,4' -DDT	ND	1.7	77	84	8.7	66	62	6.3	40 - 140	30
a-BHC	ND	1.0	70	79	12.1	61	60	1.7	40 - 140	30
Alachlor	ND	3.3	NA	NA	NC	NA	NA	NC	40 - 140	30
Aldrin	ND	1.0	73	80	9.2	64	60	6.5	40 - 140	30
b-BHC	ND	1.0	74	81	9.0	65	64	1.6	40 - 140	30
Chlordane	ND	33	74	83	11.5	65	64	1.6	40 - 140	30
d-BHC	ND	3.3	74	81	9.0	62	59	5.0	40 - 140	30
Dieldrin	ND	1.0	76	84	10.0	65	62	4.7	40 - 140	30
Endosulfan I	ND	3.3	80	91	12.9	68	65	4.5	40 - 140	30

QA/QC Data

SDG I.D.: GCA98805

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Endosulfan II	ND	3.3	78	86	9.8	67	64	4.6	40 - 140	30	
Endosulfan sulfate	ND	3.3	74	81	9.0	64	61	4.8	40 - 140	30	
Endrin	ND	3.3	79	88	10.8	69	66	4.4	40 - 140	30	
Endrin aldehyde	ND	3.3	72	79	9.3	63	59	6.6	40 - 140	30	
Endrin ketone	ND	3.3	78	85	8.6	63	67	6.2	40 - 140	30	
g-BHC	ND	1.0	71	80	11.9	62	62	0.0	40 - 140	30	
Heptachlor	ND	3.3	70	80	13.3	63	62	1.6	40 - 140	30	
Heptachlor epoxide	ND	3.3	74	80	7.8	63	62	1.6	40 - 140	30	
Methoxychlor	ND	3.3	79	88	10.8	68	121	56.1	40 - 140	30	r
Toxaphene	ND	130	NA	NA	NC	NA	NA	NC	40 - 140	30	
% DCBP	86	%	74	83	11.5	70	68	2.9	30 - 150	30	
% TCMX	82	%	72	78	8.0	66	65	1.5	30 - 150	30	

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
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
August 17, 2018

Friday, August 17, 2018

Criteria: CT: GBM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCA98805 - TIGHE

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CA98805	$8270-SMR	Dibenz(a,h)anthracene	CT / RSR DEC I/C (mg/kg) / APS Organics	1300	1200	1000	1000	ug/Kg
CA98805	$8270-SMR	N-Nitrosodimethylamine	CT / RSR DEC I/C (mg/kg) / APS Organics	ND	760	360	360	ug/Kg
CA98805	$8270-SMR	Benzidine	CT / RSR DEC I/C (mg/kg) / APS Organics	ND	1500	200	200	ug/Kg
CA98805	$8270-SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	2900	1200	1000	1000	ug/Kg
CA98805	$8270-SMR	Dibenz(a,h)anthracene	CT / RSR DEC RES (mg/kg) / APS Organics	1300	1200	1000	1000	ug/Kg
CA98805	$8270-SMR	Benzo(ghi)perylene	CT / RSR DEC RES (mg/kg) / APS Organics	9400	1000	8400	8400	ug/Kg
CA98805	$8270-SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	6800	1300	1000	1000	ug/Kg
CA98805	$8270-SMR	Benzidine	CT / RSR DEC RES (mg/kg) / APS Organics	ND	1500	200	200	ug/Kg
CA98805	$8270-SMR	N-Nitrosodimethylamine	CT / RSR DEC RES (mg/kg) / APS Organics	ND	760	200	200	ug/Kg
CA98805	$8270-SMR	N-Nitrosodi-n-propylamine	CT / RSR DEC RES (mg/kg) / APS Organics	ND	760	200	200	ug/Kg
CA98805	$8270-SMR	2,6-Dinitrotoluene	CT / RSR DEC RES (mg/kg) / APS Organics	ND	1200	900	900	ug/Kg
CA98805	$8270-SMR	2,4-Dinitrotoluene	CT / RSR DEC RES (mg/kg) / APS Organics	ND	1500	900	900	ug/Kg
CA98805	$8270-SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	2000	1000	1000	1000	ug/Kg
CA98805	$8270-SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	2900	1200	1000	1000	ug/Kg
CA98805	$8270-SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	3000	1000	1000	1000	ug/Kg
CA98805	$8270-SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	9400	1000	1000	1000	ug/Kg
CA98805	$8270-SMR	Dibenz(a,h)anthracene	CT / RSR GB (mg/kg) / APS Organics	1300	1200	1000	1000	ug/Kg
CA98805	$8270-SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	6800	1300	1000	1000	ug/Kg
CA98805	$8270-SMR	4-Chloroaniline	CT / RSR GB (mg/kg) / APS Organics	ND	1500	1000	1000	ug/Kg
CA98805	$8270-SMR	2,4-Dinitrotoluene	CT / RSR GB (mg/kg) / APS Organics	ND	1500	1000	1000	ug/Kg
CA98805	$8270-SMR	2,6-Dinitrotoluene	CT / RSR GB (mg/kg) / APS Organics	ND	1200	1000	1000	ug/Kg
CA98805	$8270-SMR	Benzidine	CT / RSR GB (mg/kg) / APS Organics	ND	1500	1000	1000	ug/Kg
CA98805	$8270-SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	3000	1000	1000	1000	ug/Kg
CA98805	$8270-SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	2900	1200	1000	1000	ug/Kg
CA98805	$8270-SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	3000	1000	1000	1000	ug/Kg
CA98805	$8270-SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	2000	1000	1000	1000	ug/Kg
CA98805	$8270-SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	3200	1000	1000	1000	ug/Kg
CA98805	$8270-SMR	Pentachlorophenol	CT / RSR GB (mg/kg) / Semivolatiles	ND	1400	1000	1000	ug/Kg
CA98806	$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	5500	260	1000	1000	ug/Kg
CA98806	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	1900	260	1000	1000	ug/Kg
CA98806	$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	6800	260	1000	1000	ug/Kg
CA98806	$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	5500	260	1000	1000	ug/Kg
CA98806	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	2300	260	1000	1000	ug/Kg
CA98806	$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	5900	260	1000	1000	ug/Kg
CA98806	$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	2000	260	1000	1000	ug/Kg
CA98806	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	1900	260	1000	1000	ug/Kg
CA98806	$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	6800	260	1000	1000	ug/Kg
CA98806	$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	2900	260	1000	1000	ug/Kg
CA98806	$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	2300	260	1000	1000	ug/Kg
CA98806	$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	5500	260	1000	1000	ug/Kg
CA98806	$8260MAR	1,2-Dibromoethane	CT / RSR DEC RES (mg/kg) / Volatiles	ND	40	7	7	ug/Kg

Friday, August 17, 2018

Criteria: CT: GBM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCA98805 - TIGHE

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CA98806	$8260MAR	1,2-Dibromo-3-chloropropane	CT / RSR GB (mg/kg) / APS Organics	ND	80	40	40	ug/Kg
CA98806	$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR DEC I/C (mg/kg) / Pest/PCB/TPH	6600	290	2500	2500	mg/Kg
CA98806	$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR DEC RES (mg/kg) / Pest/PCB/TPH	6600	290	500	500	mg/Kg
CA98806	$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR GB (mg/kg) / Pesticides/TPH	6600	290	2500	2500	mg/Kg
CA98807	$8270-SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	2100	260	1000	1000	ug/Kg
CA98807	$8270-SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	2100	260	1000	1000	ug/Kg
CA98807	$8270-SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	3300	260	1000	1000	ug/Kg
CA98807	$8270-SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	3100	260	1000	1000	ug/Kg
CA98807	$8270-SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	3100	260	1000	1000	ug/Kg
CA98807	$8270-SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	2900	260	1000	1000	ug/Kg
CA98807	$8270-SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	1900	260	1000	1000	ug/Kg
CA98807	$8270-SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1900	260	1000	1000	ug/Kg
CA98807	$8270-SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	1900	260	1000	1000	ug/Kg
CA98807	$8270-SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	2400	260	1000	1000	ug/Kg
CA98807	$8270-SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	2400	260	1000	1000	ug/Kg
CA98807	$8270-SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	2300	260	1000	1000	ug/Kg
CA98807	$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR DEC RES (mg/kg) / Pest/PCB/TPH	760	280	500	500	mg/Kg
CA98808	$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR DEC RES (mg/kg) / Pest/PCB/TPH	710	270	500	500	mg/Kg
CA98809	$8260MAR	Benzene	CT / RSR GB (mg/kg) / Volatiles	3000	200	200	200	ug/Kg
CA98809	$8270-SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	1300	250	1000	1000	ug/Kg
CA98809	$8270-SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	1400	250	1000	1000	ug/Kg
CA98809	$8270-SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1600	250	1000	1000	ug/Kg
CA98809	$8270-SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1300	250	1000	1000	ug/Kg
CA98809	$8270-SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1700	250	1000	1000	ug/Kg
CA98809	$8270-SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	1600	250	1000	1000	ug/Kg
CA98809	$8270-SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	2400	250	1000	1000	ug/Kg
CA98809	$8270-SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	1400	250	1000	1000	ug/Kg
CA98809	$8270-SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	1300	250	1000	1000	ug/Kg
CA98809	$8270-SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	1600	250	1000	1000	ug/Kg
CA98809	$8270-SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	1500	250	1000	1000	ug/Kg
CA98809	$8270-SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	1700	250	1000	1000	ug/Kg
CA98809	AS-SM	Arsenic	CT / RSR DEC I/C (mg/kg) / Inorganics	14.5	0.78	10	10	mg/Kg
CA98809	AS-SM	Arsenic	CT / RSR DEC RES (mg/kg) / Inorganics	14.5	0.78	10	10	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 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.

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

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

Project Location: ROCKVILLE MGP ***Project Number:***

Laboratory Sample ID(s): CA98805-CA98810 ***Sampling Date(s):*** 7/26/2018

List RCP Methods Used (e.g., 8260, 8270, et cetera) 1311/1312, 6010, 7470/7471, 8081, 8082, 8260, 8270, ETPH, 9010/9012

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	***VPH and EPH methods only:*** **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 Reasonable Confidence Protocol documents acheived? See Sections: ICP Narration, PEST Narration, SVOA Narration, VOA Narration.**	☐ Yes ☑ No
5	**a) Were reporting limits specified or referenced on the chain-of-custody?** **b) Were these reporting limits met?**	☑ Yes ☐ No ☐ 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 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: MaTaylor **Position:** Project Manager

Printed Name: Maryam Taylor **Date:** Friday, August 17, 2018

Name of Laboratory Phoenix Environmental Labs, Inc.

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

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RCP Certification Report

August 17, 2018

SDG I.D.: GCA98805

SDG Comments

8270 Semi-volatile Organics:(CA98806, CA98808, CA98810)
The client requested a short list for 8270 RCP Semivolatile. Only the PAH constituents are reported as requested on the chain-of-custody.

Sample(s) required a dilution for Volatiles due to the presence of target and/or non-target compounds. This resulted in elevated reporting limits that exceed the requested criteria for one or more analytes.

Sample(s) required a dilution for Semivolatiles due to a matrix interference and/or the presence of a large amount of non-target material in the sample. This resulted in elevated reporting limits that exceed the requested criteria for one or more analytes.

Cyanide Narration

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

Instrument:

LACHAT 07/27/18-1 Dustin Harrison, Greg Danielewski, Chemist 07/27/18

CA98805

The samples were distilled in accordance with the method.
The initial calibration met criteria.

The calibration check standards (ICV,CCV) were within 15% of true value and were analyzed at a frequencey of one per ten samples.
The continuing calibration blanks (ICB,CCB) had concentrations less than the reporting level.

The method blank, laboratory control sample (LCS), and matrix spike were distilled with the samples.

LACHAT 07/30/18-1 Dustin Harrison, Greg Danielewski, Chemist 07/30/18

CA98807, CA98808, CA98809, CA98810

The samples were distilled in accordance with the method.
The initial calibration met criteria.

The calibration check standards (ICV,CCV) were within 15% of true value and were analyzed at a frequencey of one per ten samples.
The continuing calibration blanks (ICB,CCB) had concentrations less than the reporting level.

The method blank, laboratory control sample (LCS), and matrix spike were distilled with the samples.

LACHAT 08/06/18-1 Dustin Harrison, Greg Danielewski, Chemist 08/06/18

CA98806

The samples were distilled in accordance with the method.
The initial calibration met criteria.

The calibration check standards (ICV,CCV) were within 15% of true value and were analyzed at a frequencey of one per ten samples.
The continuing calibration blanks (ICB,CCB) had concentrations less than the reporting level.

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RCP Certification Report

August 17, 2018

SDG I.D.: GCA98805

Cyanide Narration

The method blank, laboratory control sample (LCS), and matrix spike were distilled with the samples.

QC (Batch Specific):

Batch 440581 (CA98176)

CA98805

All LCS recoveries were within 80 - 120 with the following exceptions: None.
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils

Batch 440745 (CA99405)

CA98807, CA98808, CA98809, CA98810

All LCS recoveries were within 80 - 120 with the following exceptions: None.
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils

QC (Site Specific):

Batch 441746 (CA98806)

CA98806

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils

ETPH Narration

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

Instrument:

AU-FID21 07/30/18-1 Jeff Bucko, Chemist 07/30/18

CA98806, CA98807, CA98808, CA98810

The initial calibration (ETPH620I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-FID22 07/27/18-1 Jeff Bucko, Chemist 07/27/18

CA98809

The initial calibration (ETPH621I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 440642 (CA98514)

CA98806, CA98807, CA98808

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.

Batch 440643 (CA99145)

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SDG I.D.: GCA98805

ETPH Narration

CA98809, CA98810

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 07/27/18 07:20 Rick Schweitzer, Chemist 07/27/18

CA98805, CA98807, CA98809

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.

MERLIN 08/07/18 08:24 Rick Schweitzer, Chemist 08/07/18

CA98805

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 440636 (CA98508)

CA98805, CA98807, CA98809

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

Batch 442009 (CA98182)

CA98805

All LCS recoveries were within 80 - 120 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%.

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Certification Report

August 17, 2018

SDG I.D.: GCA98805

Mercury Narration

ICP Metals Narration

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

QC Batch 440577 (Samples: CA98805, CA98807, CA98809): -----

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

Instrument:

ARCOS 07/26/18 11:51 Emily Kolominskaya, Chemist 07/26/18

CA98805, CA98807, CA98809

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.

BLUE 08/07/18 13:40 Emily Kolominskaya, Chemist 08/07/18

CA98805

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.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 440577 (CA98999)

CA98805, CA98807, CA98809

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

Batch 442012 (CA96215)

CA98805

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-ECD24 07/27/18-1 Adam Werner, Chemist 07/27/18

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RCP Certification Report

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SDG I.D.: GCA98805

PCB Narration

CA98809

The initial calibration (PC705AI) RSD for the compound list was less than 20% except for the following compounds: None.
The initial calibration (PC705BI) 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 440542 (CA99028)

CA98809

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.

PEST Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? No.

QC Batch 441761 (Samples: CA98805): -----

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

Instrument:

AU-ECD7 08/13/18-1 Carol Wohlmuth, Chemist 08/13/18

CA98805

The initial calibration (PS716AI) RSD for the compound list was less than 20% except for the following compounds: None.
The initial calibration (PS716BI) RSD for the compound list was less than 20% except for the following compounds: None.
The Endrin and DDT breakdown does not exceed 15% except for the following compounds:None.
The Endrin and DDT breakdown does not exceed the maximum of 20% except for the following compounds:None.
The continuing calibration %D for the compound list was less than 20% except for the following compounds:
Samples: CA98805
Preceding CC 813A005 - None.
Succeeding CC 813A018 - Endosulfan II 24%H (20%)

QC (Batch Specific):

Batch 441761 (CB04784)

CA98805

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

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SDG I.D.: GCA98805

SVOA Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? No.

QC Batch 440584 (Samples: CA98807, CA98809): -----

One or more analytes is below the method criteria. A low bias for these analytes is possible. (2,4-Dinitrophenol, Benzoic Acid)

The LCS and/or the LCSD recovery is below the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (4,6-Dinitro-2-methylphenol)

Instrument:

CHEM07 08/04/18-1 Matt Richard, Chemist 08/04/18

CA98806

The DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

Initial Calibration Verification (CHEM07/bn_0802):
95% of target compounds met criteria.
The following compounds had %RSDs >20%: Benzo(a)pyrene 24% (20%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM07/0804_02A-bn_0802):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: % Nitrobenzene-d5 43%L (30%)
The following compounds did not meet maximum % deviations: % Nitrobenzene-d5 43%L (40%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM07 08/05/18-1 Matt Richard, Chemist 08/05/18

CA98806

The DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

Initial Calibration Verification (CHEM07/bn_0802):
95% 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 (CHEM07/0805_02A-bn_0802):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% 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.

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RCP Certification Report

August 17, 2018

SDG I.D.: GCA98805

SVOA Narration

CHEM07 08/06/18-1 Harry Mullin, Chemist 08/06/18

CA98806

The DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

Initial Calibration Verification (CHEM07/bn_0802):
95% 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 (CHEM07/0806_05-bn_0802):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% 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.

CHEM27 07/26/18-1 Keith Aloisa, Chemist 07/26/18

CA98807, CA98809

Initial Calibration Verification (CHEM27/SPLIT_0726):
95% of target compounds met criteria.
The following compounds had %RSDs >20%: 2,4-Dinitrophenol 34% (20%), 4,6-Dinitro-2-methylphenol 21% (20%), Benzidine 24% (20%)
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.053 (0.1), Hexachlorobenzene 0.086 (0.1)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM27/0726_31-SPLIT_0726):
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: 2-Nitrophenol 0.050 (0.1), Hexachlorobenzene 0.084 (0.1)
The following compounds did not meet minimum response factors: None.

CHEM29 07/26/18-1 Keith Aloisa, Chemist 07/26/18

CA98805, CA98808, CA98810

Initial Calibration Verification (CHEM29/SPLIT_0726):
92% of target compounds met criteria.
The following compounds had %RSDs >20%: 2,4-Dinitrophenol 37% (20%), 2,4-Dinitrotoluene 24% (20%), 4,6-Dinitro-2-methylphenol 39% (20%), 4-Nitrophenol 23% (20%), Di-n-octylphthalate 21% (20%)
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.043 (0.1), Hexachlorobenzene 0.081 (0.1)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM29/0726_31-SPLIT_0726):

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SDG I.D.: GCA98805

SVOA Narration

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: 2-Nitrophenol 0.044 (0.1), Hexachlorobenzene 0.077 (0.1)
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 440582 (CA98597)

CA98805, CA98808, CA98810

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%)

Batch 440584 (CA99033)

CA98807, CA98809

All LCS recoveries were within 30 - 130 with the following exceptions: 2,4-Dinitrophenol(12%), Benzoic Acid(<10%)
All LCSD recoveries were within 30 - 130 with the following exceptions: 2,4-Dinitrophenol(<10%), 4,6-Dinitro-2-methylphenol(23%), Benzoic Acid(<10%)
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%)

Batch 441636 (CB04593)

CA98806

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%)

VOA Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? No.

QC Batch 440922 (Samples: CA98807, CA98809, CA98810): -----

The LCS and/or the LCSD recovery is below the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (Acetone)

Instrument:

CHEM14 07/30/18-3 Jane Li, Chemist 07/30/18

CA98806

Initial Calibration Verification (CHEM14/VT-0730):

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

August 17, 2018

SDG I.D.: GCA98805

VOA Narration

98% of target compounds met criteria.
The following compounds had %RSDs >20%: Acetone 22% (20%), Chloroethane 21% (20%)
The following compounds did not meet recommended response factors: Acetone 0.090 (0.1)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM14/0730_45-VT-0730):
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.

CHEM26 07/27/18-2 Jane Li, Chemist 07/27/18

CA98807, CA98809, CA98810

Initial Calibration Verification (CHEM26/VT-0726):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Acetone 26% (20%), Methylene chloride 22% (20%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM26/0727_34-VT-0726):
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.

CHEM26 07/28/18-1 Jane Li, Chemist 07/28/18

CA98807, CA98808, CA98809

Initial Calibration Verification (CHEM26/VT-0726):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Acetone 26% (20%), Methylene chloride 22% (20%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM26/0728_02-VT-0726):
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 440922 (CA99355)

CA98807, CA98809, CA98810

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

August 17, 2018

SDG I.D.: GCA98805

VOA Narration

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: Acetone(65%)
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Batch 441070 (CB00642)

CA98806

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QC (Site Specific):

Batch 440931 (CA98808)

CA98807, CA98808, CA98809

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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.
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 30% with the following exceptions: None.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Temperature Narration

The samples were received at 4.1C with cooling initiated.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler: Yes [✓] No [ ]
Coolant: IPK [ ] ICE [✓] No [ ]

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

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

Temp 4.1 °C Pg 1 of 1

Contact Options:
[ ] Fax:
[ ] Phone:
[✓] Email: Lmalley@tighebond.com

Customer: Tighe + Bond
Address: 213 Court St Suite 1100
Middletown CT

Project: Rockville MGP
Report to: Lynn Malley
Invoice to: Tighe + Bond

Project P.O: 14-0758-94B

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 7/26/14

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

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOC	PAH	TCLP	Cyanide (Total)	SVOCs	RCRA 8 Metals	PCBs	Soil VOA Vials [✓] methanol [✓] H2O	GL Soil container (4) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle
98805	SB-31 (1-3 Ft)	S	7/26/14	09:30		X		X		X		3	1								
98806	SB-31 (15-17Ft)			09:45	X		X					3	1								
98807	SB-30 (2-4 Ft)			11:00	X		X	X	X	X		3	1								
98808	SB-30 (15-17Ft)			12:00	X	X	X	X				3	1								
98809	SB-24 (1-3 Ft)			13:30	X		X	X	X	X	X	3	1								
98810	SB-24 (22-24 Ft)	L	—		X	X	X	X				3	1								

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	7/26/14	16:14

Comments, Special Requirements or Regulations:

Turnaround:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[✓] Standard
[ ] Other
* SURCHARGE APPLIES

RI
[ ] Direct Exposure (Residential)
[ ] GW
[ ] Other

CT
[✓] RCP Cert
[ ] GW Protection
[ ] SW Protection
[ ] GA Mobility
[✓] GB Mobility
[ ] Residential DEC
[ ] I/C DEC
[ ] Other

MA
[ ] MCP Certification
[ ] GW-1
[ ] GW-2
[ ] GW-3
[ ] S-1
[ ] S-2
[ ] S-3
[ ] MWRA eSMART
[ ] Other

State where samples were collected: CT

Data Format
[✓] Excel
[✓] PDF
[ ] GIS/Key
[ ] EQuIS
[✓] Other Equator

Data Package
[ ] Tier II Checklist
[ ] Full Data Package*
[✓] Phoenix Std Report
[ ] Other

* SURCHARGE APPLIES

The Connecticut Light and Power Company
d/b/a Eversource Energy
Docket No. 26-05-10
Date Issued September 29, 2026
RSR-032 Attachment 17
Page 576 of 1282

Client Services

From: Lynn E. Willey <LEWilley@tighebond.com>
Sent: Thursday, August 02, 2018 5:18 PM
To: Client Services
Cc: Benjamin P. Caswell
Subject: Additional Analyses Rockville MGP
Attachments: SB 31, 28 addl analysis.pdf

Hi there Phoenix:

I need the additional analysis for the following samples.

- SB-31 (1-3): change PAH to SVOC, add pesticides (98805)
- SB-31 (15-17): add PAHs and TCN (98806)
- SB-29 (3-5) : add PAHs, ETPH and Pesticides

Thanks.

Lynn E. Willey, P.G., LEP | Senior Environmental Scientist
Tighe & Bond | 213 Court Street Suite 1100 | Middletown, CT 06457
| 860.852.5214 | 860-729-7502 (cell)
www.tighebond.com | Follow us on: Twitter Facebook LinkedIn



Sarah Bell

From: Benjamin P. Caswell <BCaswell@tighebond.com>
Sent: Monday, August 06, 2018 2:02 PM
To: Sarah Bell
Cc: Lynn E. Willey
Subject: Additional Requests - Rockville MGP

Hi Sarah,

Thank you for getting the prelim data over. Can you please activate the following samples:

Phoenix ID	T&B ID	Analysis
GCA98180	SB-55 (2-4 ft)	PCBs
GCA98177	SB-57 (2-4 ft)	PCBs
GCA98182	SB-54 (2-4 ft)	SPLP RSR Metals
GCA98176	SB-58 (0.5-2 ft)	SPLP RSR Metals
GCA98805	SB-31 (1-3 ft)	SPLP RSR Metals

Just a note the two samples for PCBs are out of hold time starting tomorrow.

Thank you,
Ben

Benjamin Caswell | Environmental Scientist
Tighe&Bond | 213 Court St., Suite 1100 | Middletown, CT 06457 | 860.852.5220 | 401.787.0905 (cell)
www.tighebond.com | Follow us on: Twitter Facebook LinkedIn

Sarah Bell

From: Benjamin P. Caswell <BCaswell@tighebond.com>
Sent: Friday, August 03, 2018 10:27 AM
To: Sarah Bell
Subject: Rockville MGP sample additions and prelim data

Good morning Sarah,

Can you please make the following changes:

SB-29 (3-5 ft) [99810]: Change PAH to SVOC
SB-30 (2-4 ft) [98807]: Add total cyanide
SB-32 (2-4 ft) [96215]: Add SPLP RCP Metals

Also is there any preliminary metals data available for GCA98805, GCA99810 and/or GCA 98174? We need to select some additional samples for SPLP metals within those delivery groups. I am also looking for ETPH data from GCA9817 so we can select two samples for PCB analysis.

Thank you!
Ben

Benjamin Caswell | Environmental Scientist
Tighe&Bond | 213 Court St., Suite 1100 | Middletown, CT 06457 | 860.852.5220 | 401.787.0905 (cell)
www.tighebond.com | Follow us on: Twitter Facebook LinkedIn



PHOENIX
Environmental Laboratories, Inc.

Friday, August 10, 2018

Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Project ID: ROCKVILLE MGP
Sample ID#s: CA99810 - CA99813

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.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

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 06040
Telephone (860) 645-1102 Fax (860) 645-0823

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

Analysis Report

August 10, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		07/27/18	8:30
Location Code:	TIGHE-DAS	Received by:	SW	07/27/18	16:06
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCA99810
Phoenix ID: CA99810

Project ID: ROCKVILLE MGP
Client ID: SB-29 (3-5 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	95		%		08/03/18	Q	SW846-%Solid
Soil Extraction for Pesticide	Completed				08/03/18	JJ/V	SW3545A
Soil Extraction for SVOA	Completed				08/06/18	NT/CKV	SW3545A
Extraction of CT ETPH	Completed				08/03/18	AA/VCK	SW3545A
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	520	520	mg/Kg	10	08/04/18	AW	CTETPH 8015D
Identification	ND		mg/Kg	10	08/04/18	AW	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	Diluted Out		%	10	08/04/18	AW	50 - 150 %
Pesticides							
4,4' -DDD	ND	6.9	ug/Kg	2	08/09/18	CW	SW8081B
4,4' -DDE	ND	6.9	ug/Kg	2	08/09/18	CW	SW8081B
4,4' -DDT	ND	6.9	ug/Kg	2	08/09/18	CW	SW8081B
a-BHC	ND	6.9	ug/Kg	2	08/09/18	CW	SW8081B
Alachlor	ND	6.9	ug/Kg	2	08/09/18	CW	SW8081B
Aldrin	ND	3.5	ug/Kg	2	08/09/18	CW	SW8081B
b-BHC	ND	6.9	ug/Kg	2	08/09/18	CW	SW8081B
Chlordane	ND	35	ug/Kg	2	08/09/18	CW	SW8081B
d-BHC	ND	6.9	ug/Kg	2	08/09/18	CW	SW8081B
Dieldrin	ND	3.5	ug/Kg	2	08/09/18	CW	SW8081B
Endosulfan I	ND	6.9	ug/Kg	2	08/09/18	CW	SW8081B
Endosulfan II	ND	6.9	ug/Kg	2	08/09/18	CW	SW8081B
Endosulfan sulfate	ND	6.9	ug/Kg	2	08/09/18	CW	SW8081B
Endrin	ND	6.9	ug/Kg	2	08/09/18	CW	SW8081B
Endrin aldehyde	ND	15	ug/Kg	2	08/09/18	CW	SW8081B
Endrin ketone	ND	6.9	ug/Kg	2	08/09/18	CW	SW8081B

Project ID: ROCKVILLE MGP
Client ID: SB-29 (3-5 FT)

Phoenix I.D.: CA99810

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
g-BHC	ND	1.4	ug/Kg	2	08/09/18	CW	SW8081B
Heptachlor	ND	6.9	ug/Kg	2	08/09/18	CW	SW8081B
Heptachlor epoxide	ND	6.9	ug/Kg	2	08/09/18	CW	SW8081B
Methoxychlor	ND	35	ug/Kg	2	08/09/18	CW	SW8081B
Toxaphene	ND	140	ug/Kg	2	08/09/18	CW	SW8081B
QA/QC Surrogates							
% DCBP	39		%	2	08/09/18	CW	30 - 150 %
% TCMX	59		%	2	08/09/18	CW	30 - 150 %
Semivolatiles							
1,2,4,5-Tetrachlorobenzene	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
1,2,4-Trichlorobenzene	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
1,2-Dichlorobenzene	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
1,2-Diphenylhydrazine	ND	680	ug/Kg	2	08/08/18	KCA	SW8270D
1,3-Dichlorobenzene	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
1,4-Dichlorobenzene	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
2,4,5-Trichlorophenol	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
2,4,6-Trichlorophenol	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
2,4-Dichlorophenol	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
2,4-Dimethylphenol	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
2,4-Dinitrophenol	ND	680	ug/Kg	2	08/08/18	KCA	SW8270D
2,4-Dinitrotoluene	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
2,6-Dinitrotoluene	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
2-Chloronaphthalene	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
2-Chlorophenol	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
2-Methylnaphthalene	730	480	ug/Kg	2	08/08/18	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
2-Nitroaniline	ND	680	ug/Kg	2	08/08/18	KCA	SW8270D
2-Nitrophenol	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	680	ug/Kg	2	08/08/18	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
3-Nitroaniline	ND	680	ug/Kg	2	08/08/18	KCA	SW8270D
4,6-Dinitro-2-methylphenol	ND	680	ug/Kg	2	08/08/18	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	680	ug/Kg	2	08/08/18	KCA	SW8270D
4-Chloro-3-methylphenol	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
4-Chloroaniline	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
4-Nitroaniline	ND	1100	ug/Kg	2	08/08/18	KCA	SW8270D
4-Nitrophenol	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
Acenaphthene	710	480	ug/Kg	2	08/08/18	KCA	SW8270D
Acenaphthylene	5500	480	ug/Kg	2	08/08/18	KCA	SW8270D
Acetophenone	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
Aniline	ND	680	ug/Kg	2	08/08/18	KCA	SW8270D
Anthracene	2900	480	ug/Kg	2	08/08/18	KCA	SW8270D
Benz(a)anthracene	5000	480	ug/Kg	2	08/08/18	KCA	SW8270D
Benzidine	ND	270	ug/Kg	2	08/08/18	KCA	SW8270D
Benzo(a)pyrene	6000	480	ug/Kg	2	08/08/18	KCA	SW8270D
Benzo(b)fluoranthene	4800	480	ug/Kg	2	08/08/18	KCA	SW8270D
Benzo(ghi)perylene	5400	480	ug/Kg	2	08/08/18	KCA	SW8270D
Benzo(k)fluoranthene	4100	480	ug/Kg	2	08/08/18	KCA	SW8270D

Project ID: ROCKVILLE MGP
Client ID: SB-29 (3-5 FT)

Phoenix I.D.: CA99810

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzoic acid	ND	1400	ug/Kg	2	08/08/18	KCA	SW8270D
Benzyl butyl phthalate	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	680	ug/Kg	2	08/08/18	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
Bis(2-ethylhexyl)phthalate	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
Carbazole	ND	680	ug/Kg	2	08/08/18	KCA	SW8270D
Chrysene	5400	480	ug/Kg	2	08/08/18	KCA	SW8270D
Dibenz(a,h)anthracene	1300	480	ug/Kg	2	08/08/18	KCA	SW8270D
Dibenzofuran	860	480	ug/Kg	2	08/08/18	KCA	SW8270D
Diethyl phthalate	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
Dimethylphthalate	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
Di-n-butylphthalate	ND	680	ug/Kg	2	08/08/18	KCA	SW8270D
Di-n-octylphthalate	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
Fluoranthene	6500	480	ug/Kg	2	08/08/18	KCA	SW8270D
Fluorene	970	480	ug/Kg	2	08/08/18	KCA	SW8270D
Hexachlorobenzene	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
Hexachlorobutadiene	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
Hexachlorocyclopentadiene	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
Hexachloroethane	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	5400	480	ug/Kg	2	08/08/18	KCA	SW8270D
Isophorone	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
Naphthalene	870	480	ug/Kg	2	08/08/18	KCA	SW8270D
Nitrobenzene	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
N-Nitrosodimethylamine	ND	200	ug/Kg	2	08/08/18	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	220	ug/Kg	2	08/08/18	KCA	SW8270D
N-Nitrosodiphenylamine	ND	680	ug/Kg	2	08/08/18	KCA	SW8270D
Pentachloronitrobenzene	ND	680	ug/Kg	2	08/08/18	KCA	SW8270D
Pentachlorophenol	ND	680	ug/Kg	2	08/08/18	KCA	SW8270D
Phenanthrene	6400	480	ug/Kg	2	08/08/18	KCA	SW8270D
Phenol	ND	480	ug/Kg	2	08/08/18	KCA	SW8270D
Pyrene	7700	480	ug/Kg	2	08/08/18	KCA	SW8270D
Pyridine	ND	680	ug/Kg	2	08/08/18	KCA	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	54		%	2	08/08/18	KCA	30 - 130 %
% 2-Fluorobiphenyl	58		%	2	08/08/18	KCA	30 - 130 %
% 2-Fluorophenol	44		%	2	08/08/18	KCA	30 - 130 %
% Nitrobenzene-d5	51		%	2	08/08/18	KCA	30 - 130 %
% Phenol-d5	50		%	2	08/08/18	KCA	30 - 130 %
% Terphenyl-d14	54		%	2	08/08/18	KCA	30 - 130 %

Project ID: ROCKVILLE MGP
Client ID: SB-29 (3-5 FT)

Phoenix I.D.: CA99810

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

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:

Semi-Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

Semi-Volatile Comment:
Due to a matrix interference and/or the presence of a large amount of non-target material in the sample, a dilution was required resulting in an elevated RL for the semivolatile analysis.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

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

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
August 10, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

August 10, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		07/27/18	9:10
Location Code:	TIGHE-DAS	Received by:	SW	07/27/18	16:06
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCA99810
Phoenix ID: CA99811

Project ID: ROCKVILLE MGP
Client ID: SB-29 (14-16 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	93		%		07/27/18	Q	SW846-%Solid
Total Cyanide (SW9010C Distill.)	< 0.54	0.54	mg/Kg	1	07/30/18	O/GD	SW9012B
Soil Extraction SVOA PAH	Completed				07/30/18	IG/CKV	SW3545A
Extraction of CT ETPH	Completed				07/27/18	BA/VCK	SW3545A
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	470	260	mg/Kg	5	07/30/18	AW	CTETPH 8015D
Identification	**		mg/Kg	5	07/30/18	AW	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	109		%	5	07/30/18	AW	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	4.7	ug/Kg	1	07/29/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
1,1-Dichloroethane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
1,1-Dichloroethene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
1,1-Dichloropropene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
1,2-Dibromoethane	ND	7.0	ug/Kg	1	07/29/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
1,2-Dichloroethane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
1,2-Dichloropropane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-29 (14-16 FT)

Phoenix I.D.: CA99811

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3,5-Trimethylbenzene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
1,3-Dichloropropane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
2,2-Dichloropropane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
2-Chlorotoluene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
2-Hexanone	ND	40	ug/Kg	1	07/29/18	JLI	SW8260C
2-Isopropyltoluene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
4-Chlorotoluene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	40	ug/Kg	1	07/29/18	JLI	SW8260C
Acetone	ND	400	ug/Kg	1	07/29/18	JLI	SW8260C
Acrylonitrile	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Benzene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Bromobenzene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Bromochloromethane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Bromodichloromethane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Bromoform	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Bromomethane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Carbon Disulfide	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Carbon tetrachloride	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Chlorobenzene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Chloroethane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Chloroform	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Chloromethane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Dibromochloromethane	ND	4.7	ug/Kg	1	07/29/18	JLI	SW8260C
Dibromomethane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Dichlorodifluoromethane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Ethylbenzene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Hexachlorobutadiene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Isopropylbenzene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
m&p-Xylene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	47	ug/Kg	1	07/29/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	16	ug/Kg	1	07/29/18	JLI	SW8260C
Methylene chloride	ND	16	ug/Kg	1	07/29/18	JLI	SW8260C
Naphthalene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
n-Butylbenzene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
n-Propylbenzene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
o-Xylene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
p-Isopropyltoluene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
sec-Butylbenzene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Styrene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
tert-Butylbenzene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Tetrachloroethene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	16	ug/Kg	1	07/29/18	JLI	SW8260C
Toluene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Total Xylenes	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-29 (14-16 FT)

Phoenix I.D.: CA99811

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	16	ug/Kg	1	07/29/18	JLI	SW8260C
Trichloroethene	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Trichlorofluoromethane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
Vinyl chloride	ND	7.9	ug/Kg	1	07/29/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	07/29/18	JLI	70 - 130 %
% Bromofluorobenzene	96		%	1	07/29/18	JLI	70 - 130 %
% Dibromofluoromethane	97		%	1	07/29/18	JLI	70 - 130 %
% Toluene-d8	97		%	1	07/29/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	1500	250	ug/Kg	1	07/31/18	KCA	SW8270D
Acenaphthene	ND	250	ug/Kg	1	07/31/18	KCA	SW8270D
Acenaphthylene	6200	250	ug/Kg	1	07/31/18	KCA	SW8270D
Anthracene	ND	250	ug/Kg	1	07/31/18	KCA	SW8270D
Benz(a)anthracene	440	250	ug/Kg	1	07/31/18	KCA	SW8270D
Benzo(a)pyrene	5900	250	ug/Kg	1	07/31/18	KCA	SW8270D
Benzo(b)fluoranthene	2800	250	ug/Kg	1	07/31/18	KCA	SW8270D
Benzo(ghi)perylene	4000	250	ug/Kg	1	07/31/18	KCA	SW8270D
Benzo(k)fluoranthene	2400	250	ug/Kg	1	07/31/18	KCA	SW8270D
Chrysene	2600	250	ug/Kg	1	07/31/18	KCA	SW8270D
Dibenz(a,h)anthracene	1100	250	ug/Kg	1	07/31/18	KCA	SW8270D
Fluoranthene	260	250	ug/Kg	1	07/31/18	KCA	SW8270D
Fluorene	540	250	ug/Kg	1	07/31/18	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	4000	250	ug/Kg	1	07/31/18	KCA	SW8270D
Naphthalene	1400	250	ug/Kg	1	07/31/18	KCA	SW8270D
Phenanthrene	1600	250	ug/Kg	1	07/31/18	KCA	SW8270D
Pyrene	440	250	ug/Kg	1	07/31/18	KCA	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	64		%	1	07/31/18	KCA	30 - 130 %
% Nitrobenzene-d5	67		%	1	07/31/18	KCA	30 - 130 %
% Terphenyl-d14	62		%	1	07/31/18	KCA	30 - 130 %
Field Extraction	Completed				07/27/18		SW5035A

Project ID: ROCKVILLE MGP
Client ID: SB-29 (14-16 FT)

Phoenix I.D.: CA99811

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

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:

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

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

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
August 10, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

August 10, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		07/27/18	11:50
Location Code:	TIGHE-DAS	Received by:	SW	07/27/18	16:06
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCA99810
Phoenix ID: CA99812

Project ID: ROCKVILLE MGP
Client ID: SB-59 (2-3 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	94		%		07/27/18	Q	SW846-%Solid
Total Cyanide (SW9010C Distill.)	0.80	0.53	mg/Kg	1	07/30/18	O/GD	SW9012B
Soil Extraction SVOA PAH	Completed				07/30/18	IG/CKV	SW3545A
Extraction of CT ETPH	Completed				07/27/18	BA/VCK	SW3545A
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	52	mg/Kg	1	07/28/18	JRB	CTETPH 8015D
Identification	ND		mg/Kg	1	07/28/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	64		%	1	07/28/18	JRB	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	100	ug/Kg	50	07/29/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
1,1-Dichloroethane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
1,1-Dichloroethene	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
1,1-Dichloropropene	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
1,2-Dibromoethane	ND	7.0	ug/Kg	1	07/31/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
1,2-Dichloroethane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
1,2-Dichloropropane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-59 (2-3 FT)

Phoenix I.D.: CA99812

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3,5-Trimethylbenzene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
1,3-Dichloropropane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
2,2-Dichloropropane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
2-Chlorotoluene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
2-Hexanone	ND	52	ug/Kg	1	07/31/18	JLI	SW8260C
2-Isopropyltoluene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
4-Chlorotoluene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	52	ug/Kg	1	07/31/18	JLI	SW8260C
Acetone	ND	520	ug/Kg	1	07/31/18	JLI	SW8260C
Acrylonitrile	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Benzene	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Bromobenzene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
Bromochloromethane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Bromodichloromethane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Bromoform	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Bromomethane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Carbon Disulfide	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Carbon tetrachloride	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Chlorobenzene	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Chloroethane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Chloroform	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Chloromethane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Dibromochloromethane	ND	6.2	ug/Kg	1	07/31/18	JLI	SW8260C
Dibromomethane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Dichlorodifluoromethane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Ethylbenzene	6.9	6.2	ug/Kg	1	07/31/18	JLI	SW8260C
Hexachlorobutadiene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
Isopropylbenzene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
m&p-Xylene	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	62	ug/Kg	1	07/31/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	21	ug/Kg	1	07/31/18	JLI	SW8260C
Methylene chloride	ND	21	ug/Kg	1	07/31/18	JLI	SW8260C
Naphthalene	420	370	ug/Kg	50	07/29/18	JLI	SW8260C
n-Butylbenzene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
n-Propylbenzene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
o-Xylene	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
p-Isopropyltoluene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
sec-Butylbenzene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
Styrene	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
tert-Butylbenzene	ND	460	ug/Kg	50	07/29/18	JLI	SW8260C
Tetrachloroethene	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	21	ug/Kg	1	07/31/18	JLI	SW8260C
Toluene	4.8	4.1	ug/Kg	1	07/31/18	JLI	SW8260C
Total Xylenes	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-59 (2-3 FT)

Phoenix I.D.: CA99812

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	920	ug/Kg	50	07/29/18	JLI	SW8260C
Trichloroethene	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Trichlorofluoromethane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
Vinyl chloride	ND	10	ug/Kg	1	07/31/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	50	07/29/18	JLI	70 - 130 %
% Bromofluorobenzene	98		%	50	07/29/18	JLI	70 - 130 %
% Dibromofluoromethane	103		%	1	07/31/18	JLI	70 - 130 %
% Toluene-d8	95		%	1	07/31/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	550	250	ug/Kg	1	07/31/18	KCA	SW8270D
Acenaphthene	ND	250	ug/Kg	1	07/31/18	KCA	SW8270D
Acenaphthylene	370	250	ug/Kg	1	07/31/18	KCA	SW8270D
Anthracene	ND	250	ug/Kg	1	07/31/18	KCA	SW8270D
Benz(a)anthracene	350	250	ug/Kg	1	07/31/18	KCA	SW8270D
Benzo(a)pyrene	300	250	ug/Kg	1	07/31/18	KCA	SW8270D
Benzo(b)fluoranthene	280	250	ug/Kg	1	07/31/18	KCA	SW8270D
Benzo(ghi)perylene	340	250	ug/Kg	1	07/31/18	KCA	SW8270D
Benzo(k)fluoranthene	330	250	ug/Kg	1	07/31/18	KCA	SW8270D
Chrysene	480	250	ug/Kg	1	07/31/18	KCA	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	07/31/18	KCA	SW8270D
Fluoranthene	440	250	ug/Kg	1	07/31/18	KCA	SW8270D
Fluorene	ND	250	ug/Kg	1	07/31/18	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	330	250	ug/Kg	1	07/31/18	KCA	SW8270D
Naphthalene	610	250	ug/Kg	1	07/31/18	KCA	SW8270D
Phenanthrene	520	250	ug/Kg	1	07/31/18	KCA	SW8270D
Pyrene	580	250	ug/Kg	1	07/31/18	KCA	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	60		%	1	07/31/18	KCA	30 - 130 %
% Nitrobenzene-d5	54		%	1	07/31/18	KCA	30 - 130 %
% Terphenyl-d14	61		%	1	07/31/18	KCA	30 - 130 %
Field Extraction	Completed				07/27/18		SW5035A

Project ID: ROCKVILLE MGP
Client ID: SB-59 (2-3 FT)
Phoenix I.D.: CA99812

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

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:

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

Volatile Comment:
There was a suppression of the last internal standard in the low level analysis, all affected compounds are reported from the methanol preserved high level analysis which did not exhibit this interference.

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

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
August 10, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

August 10, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		07/27/18	12:15
Location Code:	TIGHE-DAS	Received by:	SW	07/27/18	16:06
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCA99810
Phoenix ID: CA99813

Project ID: ROCKVILLE MGP
Client ID: SB-59 (22-24 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	81		%		08/02/18	Q	SW846-%Solid
Soil Extraction SVOA PAH	Completed				08/02/18	JJ/CKV	SW3545A
Extraction of CT ETPH	Completed				08/02/18	JJ/VCK	SW3545A
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	60	mg/Kg	1	08/03/18	JRB	CTETPH 8015D
Identification	ND		mg/Kg	1	08/03/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	55		%	1	08/03/18	JRB	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.8	ug/Kg	1	08/03/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
1,1-Dichloroethane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
1,1-Dichloroethene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
1,1-Dichloropropene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
1,2-Dibromoethane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
1,2-Dichloroethane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
1,2-Dichloropropane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-59 (22-24 FT)

Phoenix I.D.: CA99813

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
1,3-Dichloropropane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
2,2-Dichloropropane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
2-Chlorotoluene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
2-Hexanone	ND	23	ug/Kg	1	08/03/18	JLI	SW8260C
2-Isopropyltoluene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
4-Chlorotoluene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	23	ug/Kg	1	08/03/18	JLI	SW8260C
Acetone	ND	230	ug/Kg	1	08/03/18	JLI	SW8260C
Acrylonitrile	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Benzene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Bromobenzene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Bromochloromethane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Bromodichloromethane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Bromoform	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Bromomethane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Carbon Disulfide	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Carbon tetrachloride	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Chlorobenzene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Chloroethane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Chloroform	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Chloromethane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Dibromochloromethane	ND	2.8	ug/Kg	1	08/03/18	JLI	SW8260C
Dibromomethane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Dichlorodifluoromethane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Ethylbenzene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Hexachlorobutadiene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Isopropylbenzene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
m&p-Xylene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	28	ug/Kg	1	08/03/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	9.3	ug/Kg	1	08/03/18	JLI	SW8260C
Methylene chloride	ND	9.3	ug/Kg	1	08/03/18	JLI	SW8260C
Naphthalene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
n-Butylbenzene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
n-Propylbenzene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
o-Xylene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
p-Isopropyltoluene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
sec-Butylbenzene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Styrene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
tert-Butylbenzene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Tetrachloroethene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	9.3	ug/Kg	1	08/03/18	JLI	SW8260C
Toluene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Total Xylenes	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-59 (22-24 FT)

Phoenix I.D.: CA99813

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,4-dichloro-2-butene	ND	9.3	ug/Kg	1	08/03/18	JLI	SW8260C
Trichloroethene	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Trichlorofluoromethane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
Vinyl chloride	ND	4.6	ug/Kg	1	08/03/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	95		%	1	08/03/18	JLI	70 - 130 %
% Bromofluorobenzene	98		%	1	08/03/18	JLI	70 - 130 %
% Dibromofluoromethane	100		%	1	08/03/18	JLI	70 - 130 %
% Toluene-d8	89		%	1	08/03/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	ND	280	ug/Kg	1	08/05/18	HM	SW8270D
Acenaphthene	ND	280	ug/Kg	1	08/05/18	HM	SW8270D
Acenaphthylene	ND	280	ug/Kg	1	08/05/18	HM	SW8270D
Anthracene	ND	280	ug/Kg	1	08/05/18	HM	SW8270D
Benz(a)anthracene	ND	280	ug/Kg	1	08/05/18	HM	SW8270D
Benzo(a)pyrene	ND	280	ug/Kg	1	08/05/18	HM	SW8270D
Benzo(b)fluoranthene	ND	280	ug/Kg	1	08/05/18	HM	SW8270D
Benzo(ghi)perylene	ND	280	ug/Kg	1	08/05/18	HM	SW8270D
Benzo(k)fluoranthene	ND	280	ug/Kg	1	08/05/18	HM	SW8270D
Chrysene	ND	280	ug/Kg	1	08/05/18	HM	SW8270D
Dibenz(a,h)anthracene	ND	280	ug/Kg	1	08/05/18	HM	SW8270D
Fluoranthene	ND	280	ug/Kg	1	08/05/18	HM	SW8270D
Fluorene	ND	280	ug/Kg	1	08/05/18	HM	SW8270D
Indeno(1,2,3-cd)pyrene	ND	280	ug/Kg	1	08/05/18	HM	SW8270D
Naphthalene	ND	280	ug/Kg	1	08/05/18	HM	SW8270D
Phenanthrene	ND	280	ug/Kg	1	08/05/18	HM	SW8270D
Pyrene	ND	280	ug/Kg	1	08/05/18	HM	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	52		%	1	08/05/18	HM	30 - 130 %
% Nitrobenzene-d5	55		%	1	08/05/18	HM	30 - 130 %
% Terphenyl-d14	69		%	1	08/05/18	HM	30 - 130 %
Field Extraction	Completed				07/27/18		SW5035A

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 there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
August 10, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Ver 2

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

QA/QC Report

August 10, 2018

QA/QC Data

SDG I.D.: GCA99810

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 440828 (mg/Kg), QC Sample No: CA99729 50X (CA99811, CA99812)													
Total Cyanide (SW9010C Distill.)	BRL	0.50	0.92	0.91	NC	96.4			101			80 - 120	30
Comment:													
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils													

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

August 10, 2018

QA/QC Data

SDG I.D.: GCA99810

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 440643 (mg/Kg), QC Sample No: CA99145 (CA99811, CA99812)										
TPH by GC (Extractable Products) - Soil										
Ext. Petroleum H.C. (C9-C36)	ND	50	67	63	6.2	75	72	4.1	60 - 120	30
% n-Pentacosane	68	%	73	67	8.6	76	78	2.6	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 440862 (ug/kg), QC Sample No: CA99355 (CA99811, CA99812)										
Polynuclear Aromatic HC - Soil										
2-Methylnaphthalene	ND	230	57	64	11.6	65	58	11.4	30 - 130	30
Acenaphthene	ND	230	71	79	10.7	77	69	11.0	30 - 130	30
Acenaphthylene	ND	230	57	64	11.6	63	56	11.8	30 - 130	30
Anthracene	ND	230	63	68	7.6	67	61	9.4	30 - 130	30
Benz(a)anthracene	ND	230	72	78	8.0	74	67	9.9	30 - 130	30
Benzo(a)pyrene	ND	230	61	68	10.9	64	58	9.8	30 - 130	30
Benzo(b)fluoranthene	ND	230	66	72	8.7	67	61	9.4	30 - 130	30
Benzo(ghi)perylene	ND	230	58	64	9.8	61	53	14.0	30 - 130	30
Benzo(k)fluoranthene	ND	230	62	68	9.2	65	58	11.4	30 - 130	30
Chrysene	ND	230	72	79	9.3	79	71	10.7	30 - 130	30
Dibenz(a,h)anthracene	ND	230	62	69	10.7	67	58	14.4	30 - 130	30
Fluoranthene	ND	230	65	71	8.8	66	60	9.5	30 - 130	30
Fluorene	ND	230	63	68	7.6	69	61	12.3	30 - 130	30
Indeno(1,2,3-cd)pyrene	ND	230	61	68	10.9	65	55	16.7	30 - 130	30
Naphthalene	ND	230	54	62	13.8	62	55	12.0	30 - 130	30
Phenanthrene	ND	230	60	67	11.0	65	59	9.7	30 - 130	30
Pyrene	ND	230	64	69	7.5	67	61	9.4	30 - 130	30
% 2-Fluorobiphenyl	62	%	51	58	12.8	57	51	11.1	30 - 130	30
% Nitrobenzene-d5	66	%	55	66	18.2	77	71	8.1	30 - 130	30
% Terphenyl-d14	63	%	58	65	11.4	59	54	8.8	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%)										
QA/QC Batch 441491 (mg/Kg), QC Sample No: CA99813 (CA99813)										
TPH by GC (Extractable Products) - Soil										
Ext. Petroleum H.C. (C9-C36)	ND	50	101	95	6.1	93	104	11.2	60 - 120	30
% n-Pentacosane	58	%	83	78	6.2	78	88	12.0	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 440895 (ug/kg), QC Sample No: CA99902 (CA99811, CA99812 (50X))										
Volatiles - Soil										
1,1,1,2-Tetrachloroethane	ND	5.0	105	106	0.9	107	105	1.9	70 - 130	30

QA/QC Data

SDG I.D.: GCA99810

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,1,1-Trichloroethane	ND	5.0	100	99	1.0	102	99	3.0	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	3.0	101	104	2.9	107	103	3.8	70 - 130	30	
1,1,2-Trichloroethane	ND	5.0	98	98	0.0	104	100	3.9	70 - 130	30	
1,1-Dichloroethane	ND	5.0	96	100	4.1	77	74	4.0	70 - 130	30	
1,1-Dichloroethene	ND	5.0	100	98	2.0	76	108	34.8	70 - 130	30	r
1,1-Dichloropropene	ND	5.0	101	98	3.0	104	100	3.9	70 - 130	30	
1,2,3-Trichlorobenzene	ND	5.0	102	101	1.0	111	111	0.0	70 - 130	30	
1,2,3-Trichloropropane	ND	5.0	95	98	3.1	98	95	3.1	70 - 130	30	
1,2,4-Trichlorobenzene	ND	5.0	104	102	1.9	108	109	0.9	70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	99	97	2.0	103	100	3.0	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	107	112	4.6	109	110	0.9	70 - 130	30	
1,2-Dibromoethane	ND	5.0	101	102	1.0	106	102	3.8	70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	98	98	0.0	102	100	2.0	70 - 130	30	
1,2-Dichloroethane	ND	5.0	96	95	1.0	99	94	5.2	70 - 130	30	
1,2-Dichloropropane	ND	5.0	99	97	2.0	102	98	4.0	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	100	99	1.0	103	101	2.0	70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	100	98	2.0	104	101	2.9	70 - 130	30	
1,3-Dichloropropane	ND	5.0	97	99	2.0	101	98	3.0	70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	99	98	1.0	102	101	1.0	70 - 130	30	
2,2-Dichloropropane	ND	5.0	109	105	3.7	109	106	2.8	70 - 130	30	
2-Chlorotoluene	ND	5.0	98	97	1.0	101	99	2.0	70 - 130	30	
2-Hexanone	ND	25	86	89	3.4	89	84	5.8	70 - 130	30	
2-Isopropyltoluene	ND	5.0	103	102	1.0	109	107	1.9	70 - 130	30	
4-Chlorotoluene	ND	5.0	99	98	1.0	102	100	2.0	70 - 130	30	
4-Methyl-2-pentanone	ND	25	91	93	2.2	96	92	4.3	70 - 130	30	
Acetone	ND	10	76	76	0.0	62	124	66.7	70 - 130	30	m,r
Acrylonitrile	ND	5.0	97	102	5.0	88	87	1.1	70 - 130	30	
Benzene	ND	1.0	99	97	2.0	103	98	5.0	70 - 130	30	
Bromobenzene	ND	5.0	101	100	1.0	104	101	2.9	70 - 130	30	
Bromochloromethane	ND	5.0	101	101	0.0	105	101	3.9	70 - 130	30	
Bromodichloromethane	ND	5.0	106	104	1.9	103	99	4.0	70 - 130	30	
Bromoform	ND	5.0	116	118	1.7	108	107	0.9	70 - 130	30	
Bromomethane	ND	5.0	105	97	7.9	61	64	4.8	70 - 130	30	m
Carbon Disulfide	ND	5.0	115	111	3.5	83	70	17.0	70 - 130	30	
Carbon tetrachloride	ND	5.0	101	103	2.0	99	98	1.0	70 - 130	30	
Chlorobenzene	ND	5.0	99	98	1.0	103	100	3.0	70 - 130	30	
Chloroethane	ND	5.0	90	93	3.3	84	87	3.5	70 - 130	30	
Chloroform	ND	5.0	99	100	1.0	102	98	4.0	70 - 130	30	
Chloromethane	ND	5.0	89	89	0.0	92	86	6.7	70 - 130	30	
cis-1,2-Dichloroethene	ND	5.0	102	101	1.0	106	101	4.8	70 - 130	30	
cis-1,3-Dichloropropene	ND	5.0	104	102	1.9	104	101	2.9	70 - 130	30	
Dibromochloromethane	ND	3.0	116	117	0.9	110	107	2.8	70 - 130	30	
Dibromomethane	ND	5.0	99	98	1.0	101	98	3.0	70 - 130	30	
Dichlorodifluoromethane	ND	5.0	95	90	5.4	103	96	7.0	70 - 130	30	
Ethylbenzene	ND	1.0	100	99	1.0	105	102	2.9	70 - 130	30	
Hexachlorobutadiene	ND	5.0	103	99	4.0	109	107	1.9	70 - 130	30	
Isopropylbenzene	ND	1.0	98	97	1.0	102	99	3.0	70 - 130	30	
m&p-Xylene	ND	2.0	99	98	1.0	104	102	1.9	70 - 130	30	
Methyl ethyl ketone	ND	5.0	83	87	4.7	85	82	3.6	70 - 130	30	
Methyl t-butyl ether (MTBE)	ND	1.0	89	87	2.3	92	87	5.6	70 - 130	30	
Methylene chloride	ND	5.0	90	86	4.5	90	85	5.7	70 - 130	30	
Naphthalene	ND	5.0	98	102	4.0	106	107	0.9	70 - 130	30	
n-Butylbenzene	ND	1.0	102	98	4.0	105	103	1.9	70 - 130	30	

QA/QC Data

SDG I.D.: GCA99810

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
n-Propylbenzene	ND	1.0	99	97	2.0	103	101	2.0	70 - 130	30	
o-Xylene	ND	2.0	98	98	0.0	103	101	2.0	70 - 130	30	
p-Isopropyltoluene	ND	1.0	101	99	2.0	106	104	1.9	70 - 130	30	
sec-Butylbenzene	ND	1.0	103	101	2.0	108	106	1.9	70 - 130	30	
Styrene	ND	5.0	102	102	0.0	107	104	2.8	70 - 130	30	
tert-Butylbenzene	ND	1.0	98	97	1.0	102	100	2.0	70 - 130	30	
Tetrachloroethene	ND	5.0	101	97	4.0	107	104	2.8	70 - 130	30	
Tetrahydrofuran (THF)	ND	5.0	91	94	3.2	102	97	5.0	70 - 130	30	
Toluene	ND	1.0	99	97	2.0	103	101	2.0	70 - 130	30	
trans-1,2-Dichloroethene	ND	5.0	105	102	2.9	105	101	3.9	70 - 130	30	
trans-1,3-Dichloropropene	ND	5.0	102	101	1.0	102	99	3.0	70 - 130	30	
trans-1,4-dichloro-2-butene	ND	5.0	115	120	4.3	111	109	1.8	70 - 130	30	
Trichloroethene	ND	5.0	103	101	2.0	107	103	3.8	70 - 130	30	
Trichlorofluoromethane	ND	5.0	95	94	1.1	73	79	7.9	70 - 130	30	
Trichlorotrifluoroethane	ND	5.0	104	97	7.0	86	81	6.0	70 - 130	30	
Vinyl chloride	ND	5.0	96	96	0.0	101	96	5.1	70 - 130	30	
% 1,2-dichlorobenzene-d4	101	%	100	100	0.0	100	100	0.0	70 - 130	30	
% Bromofluorobenzene	97	%	99	99	0.0	101	101	0.0	70 - 130	30	
% Dibromofluoromethane	99	%	103	102	1.0	100	102	2.0	70 - 130	30	
% Toluene-d8	98	%	99	98	1.0	99	99	0.0	70 - 130	30	

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 441070 (ug/kg), QC Sample No: CB00642 (CA99812)

Volatiles - Soil

1,1,1,2-Tetrachloroethane	ND	5.0	103	101	2.0	94	92	2.2	70 - 130	30	
1,1,1-Trichloroethane	ND	5.0	99	96	3.1	89	90	1.1	70 - 130	30	
1,1,2-Trichloroethane	ND	5.0	96	99	3.1	90	91	1.1	70 - 130	30	
1,1-Dichloroethane	ND	5.0	99	99	0.0	94	94	0.0	70 - 130	30	
1,1-Dichloroethene	ND	5.0	101	98	3.0	86	86	0.0	70 - 130	30	
1,1-Dichloropropene	ND	5.0	99	96	3.1	94	93	1.1	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	103	108	4.7	114	101	12.1	70 - 130	30	
1,2-Dibromoethane	ND	5.0	97	99	2.0	92	91	1.1	70 - 130	30	
1,2-Dichloroethane	ND	5.0	101	100	1.0	95	96	1.0	70 - 130	30	
1,2-Dichloropropane	ND	5.0	98	97	1.0	95	94	1.1	70 - 130	30	
1,3-Dichloropropane	ND	5.0	98	93	5.2	92	90	2.2	70 - 130	30	
2,2-Dichloropropane	ND	5.0	99	97	2.0	89	87	2.3	70 - 130	30	
2-Hexanone	ND	25	89	91	2.2	79	79	0.0	70 - 130	30	
4-Methyl-2-pentanone	ND	25	96	98	2.1	89	89	0.0	70 - 130	30	
Acetone	ND	10	74	79	6.5	63	70	10.5	70 - 130	30	m
Acrylonitrile	ND	5.0	104	109	4.7	98	98	0.0	70 - 130	30	
Benzene	ND	1.0	98	95	3.1	94	93	1.1	70 - 130	30	
Bromochloromethane	ND	5.0	97	96	1.0	90	88	2.2	70 - 130	30	
Bromodichloromethane	ND	5.0	101	101	0.0	91	92	1.1	70 - 130	30	
Bromoform	ND	5.0	108	108	0.0	87	86	1.2	70 - 130	30	
Bromomethane	ND	5.0	92	88	4.4	91	87	4.5	70 - 130	30	
Carbon Disulfide	ND	5.0	107	102	4.8	89	88	1.1	70 - 130	30	
Carbon tetrachloride	ND	5.0	100	98	2.0	88	87	1.1	70 - 130	30	
Chlorobenzene	ND	5.0	96	93	3.2	92	90	2.2	70 - 130	30	
Chloroethane	ND	5.0	101	96	5.1	95	92	3.2	70 - 130	30	
Chloroform	ND	5.0	95	94	1.1	89	89	0.0	70 - 130	30	
Chloromethane	ND	5.0	94	92	2.2	88	88	0.0	70 - 130	30	
cis-1,2-Dichloroethene	ND	5.0	96	96	0.0	92	90	2.2	70 - 130	30	

QA/QC Data

SDG I.D.: GCA99810

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
cis-1,3-Dichloropropene	ND	5.0	101	100	1.0	91	92	1.1	70 - 130	30	
Dibromochloromethane	ND	3.0	107	106	0.9	92	93	1.1	70 - 130	30	
Dibromomethane	ND	5.0	99	99	0.0	93	92	1.1	70 - 130	30	
Dichlorodifluoromethane	ND	5.0	96	95	1.0	89	87	2.3	70 - 130	30	
Ethylbenzene	ND	1.0	98	94	4.2	95	93	2.1	70 - 130	30	
m&p-Xylene	ND	2.0	94	91	3.2	92	90	2.2	70 - 130	30	
Methyl ethyl ketone	ND	5.0	91	92	1.1	82	78	5.0	70 - 130	30	
Methyl t-butyl ether (MTBE)	ND	1.0	90	92	2.2	84	82	2.4	70 - 130	30	
Methylene chloride	ND	5.0	95	91	4.3	84	83	1.2	70 - 130	30	
o-Xylene	ND	2.0	98	95	3.1	97	95	2.1	70 - 130	30	
Styrene	ND	5.0	97	95	2.1	95	92	3.2	70 - 130	30	
Tetrachloroethene	ND	5.0	97	95	2.1	94	94	0.0	70 - 130	30	
Tetrahydrofuran (THF)	ND	5.0	93	98	5.2	86	86	0.0	70 - 130	30	
Toluene	ND	1.0	101	100	1.0	96	95	1.0	70 - 130	30	
trans-1,2-Dichloroethene	ND	5.0	108	94	13.9	94	95	1.1	70 - 130	30	
trans-1,3-Dichloropropene	ND	5.0	95	96	1.0	88	88	0.0	70 - 130	30	
Trichloroethene	ND	5.0	100	98	2.0	95	94	1.1	70 - 130	30	
Trichlorofluoromethane	ND	5.0	94	90	4.3	89	85	4.6	70 - 130	30	
Trichlorotrifluoroethane	ND	5.0	101	97	4.0	90	88	2.2	70 - 130	30	
Vinyl chloride	ND	5.0	98	95	3.1	85	84	1.2	70 - 130	30	
% Dibromofluoromethane	95	%	101	102	1.0	93	93	0.0	70 - 130	30	
% Toluene-d8	95	%	102	103	1.0	100	103	3.0	70 - 130	30	

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 441911 (ug/kg), QC Sample No: CB02227 (CA99813)

Volatiles - Soil

1,1,1,2-Tetrachloroethane	ND	5.0	92	93	1.1	95	92	3.2	70 - 130	30	
1,1,1-Trichloroethane	ND	5.0	84	85	1.2	87	86	1.2	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	3.0	84	84	0.0	83	83	0.0	70 - 130	30	
1,1,2-Trichloroethane	ND	5.0	91	88	3.4	93	90	3.3	70 - 130	30	
1,1-Dichloroethane	ND	5.0	83	84	1.2	86	83	3.6	70 - 130	30	
1,1-Dichloroethene	ND	5.0	93	95	2.1	90	86	4.5	70 - 130	30	
1,1-Dichloropropene	ND	5.0	89	85	4.6	89	85	4.6	70 - 130	30	
1,2,3-Trichlorobenzene	ND	5.0	93	92	1.1	94	98	4.2	70 - 130	30	
1,2,3-Trichloropropane	ND	5.0	78	76	2.6	77	77	0.0	70 - 130	30	
1,2,4-Trichlorobenzene	ND	5.0	90	90	0.0	93	94	1.1	70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	83	81	2.4	85	82	3.6	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	96	92	4.3	89	89	0.0	70 - 130	30	
1,2-Dibromoethane	ND	5.0	87	85	2.3	88	85	3.5	70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	89	88	1.1	91	90	1.1	70 - 130	30	
1,2-Dichloroethane	ND	5.0	88	87	1.1	87	86	1.2	70 - 130	30	
1,2-Dichloropropane	ND	5.0	88	85	3.5	91	88	3.4	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	83	82	1.2	84	82	2.4	70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	84	84	0.0	85	84	1.2	70 - 130	30	
1,3-Dichloropropane	ND	5.0	83	82	1.2	83	81	2.4	70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	89	87	2.3	90	89	1.1	70 - 130	30	
2,2-Dichloropropane	ND	5.0	83	86	3.6	82	83	1.2	70 - 130	30	
2-Chlorotoluene	ND	5.0	86	85	1.2	86	85	1.2	70 - 130	30	
2-Hexanone	ND	25	76	72	5.4	70	69	1.4	70 - 130	30	m
2-Isopropyltoluene	ND	5.0	95	94	1.1	96	94	2.1	70 - 130	30	
4-Chlorotoluene	ND	5.0	83	83	0.0	84	82	2.4	70 - 130	30	
4-Methyl-2-pentanone	ND	25	86	85	1.2	84	85	1.2	70 - 130	30	

QA/QC Data

SDG I.D.: GCA99810

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Acetone	ND	10	71	69	2.9	59	50	16.5	70 - 130	30	l,m
Acrylonitrile	ND	5.0	80	85	6.1	81	83	2.4	70 - 130	30	
Benzene	ND	1.0	88	87	1.1	90	87	3.4	70 - 130	30	
Bromobenzene	ND	5.0	93	91	2.2	92	93	1.1	70 - 130	30	
Bromochloromethane	ND	5.0	85	86	1.2	89	91	2.2	70 - 130	30	
Bromodichloromethane	ND	5.0	96	95	1.0	96	93	3.2	70 - 130	30	
Bromoform	ND	5.0	99	98	1.0	89	90	1.1	70 - 130	30	
Bromomethane	ND	5.0	93	95	2.1	80	86	7.2	70 - 130	30	
Carbon Disulfide	ND	5.0	110	113	2.7	95	94	1.1	70 - 130	30	
Carbon tetrachloride	ND	5.0	87	89	2.3	87	84	3.5	70 - 130	30	
Chlorobenzene	ND	5.0	89	89	0.0	92	90	2.2	70 - 130	30	
Chloroethane	ND	5.0	103	106	2.9	83	83	0.0	70 - 130	30	
Chloroform	ND	5.0	81	82	1.2	80	79	1.3	70 - 130	30	
Chloromethane	ND	5.0	80	81	1.2	84	84	0.0	70 - 130	30	
cis-1,2-Dichloroethene	ND	5.0	87	89	2.3	91	91	0.0	70 - 130	30	
cis-1,3-Dichloropropene	ND	5.0	91	92	1.1	93	92	1.1	70 - 130	30	
Dibromochloromethane	ND	3.0	102	100	2.0	96	95	1.0	70 - 130	30	
Dibromomethane	ND	5.0	90	85	5.7	90	86	4.5	70 - 130	30	
Dichlorodifluoromethane	ND	5.0	90	92	2.2	94	91	3.2	70 - 130	30	
Ethylbenzene	ND	1.0	89	88	1.1	92	90	2.2	70 - 130	30	
Hexachlorobutadiene	ND	5.0	89	88	1.1	93	93	0.0	70 - 130	30	
Isopropylbenzene	ND	1.0	85	84	1.2	87	82	5.9	70 - 130	30	
m&p-Xylene	ND	2.0	85	85	0.0	89	86	3.4	70 - 130	30	
Methyl ethyl ketone	ND	5.0	74	71	4.1	71	71	0.0	70 - 130	30	
Methyl t-butyl ether (MTBE)	ND	1.0	94	96	2.1	101	100	1.0	70 - 130	30	
Methylene chloride	ND	5.0	81	82	1.2	83	84	1.2	70 - 130	30	
Naphthalene	ND	5.0	93	91	2.2	87	89	2.3	70 - 130	30	
n-Butylbenzene	ND	1.0	83	82	1.2	86	84	2.4	70 - 130	30	
n-Propylbenzene	ND	1.0	88	87	1.1	88	85	3.5	70 - 130	30	
o-Xylene	ND	2.0	90	89	1.1	93	92	1.1	70 - 130	30	
p-Isopropyltoluene	ND	1.0	86	84	2.4	88	86	2.3	70 - 130	30	
sec-Butylbenzene	ND	1.0	84	84	0.0	87	84	3.5	70 - 130	30	
Styrene	ND	5.0	86	86	0.0	89	88	1.1	70 - 130	30	
tert-Butylbenzene	ND	1.0	86	85	1.2	87	83	4.7	70 - 130	30	
Tetrachloroethene	ND	5.0	96	96	0.0	102	100	2.0	70 - 130	30	
Tetrahydrofuran (THF)	ND	5.0	77	77	0.0	79	80	1.3	70 - 130	30	
Toluene	ND	1.0	93	92	1.1	98	95	3.1	70 - 130	30	
trans-1,2-Dichloroethene	ND	5.0	92	95	3.2	92	95	3.2	70 - 130	30	
trans-1,3-Dichloropropene	ND	5.0	91	90	1.1	90	90	0.0	70 - 130	30	
trans-1,4-dichloro-2-butene	ND	5.0	106	103	2.9	92	92	0.0	70 - 130	30	
Trichloroethene	ND	5.0	95	92	3.2	96	93	3.2	70 - 130	30	
Trichlorofluoromethane	ND	5.0	93	95	2.1	81	87	7.1	70 - 130	30	
Trichlorotrifluoroethane	ND	5.0	99	103	4.0	101	103	2.0	70 - 130	30	
Vinyl chloride	ND	5.0	93	96	3.2	99	97	2.0	70 - 130	30	
% 1,2-dichlorobenzene-d4	95	%	102	102	0.0	104	103	1.0	70 - 130	30	
% Bromofluorobenzene	97	%	95	97	2.1	98	96	2.1	70 - 130	30	
% Dibromofluoromethane	99	%	98	99	1.0	102	105	2.9	70 - 130	30	
% Toluene-d8	88	%	102	102	0.0	103	104	1.0	70 - 130	30	

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Data

SDG I.D.: GCA99810

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 441524 (ug/kg), QC Sample No: CB03983 (CA99813)										
Semivolatiles - Soil										
2-Methylnaphthalene	ND	230	60	57	5.1	57	64	11.6	30 - 130	30
Acenaphthene	ND	230	70	72	2.8	70	76	8.2	30 - 130	30
Acenaphthylene	ND	130	60	62	3.3	59	64	8.1	30 - 130	30
Anthracene	ND	230	65	67	3.0	60	68	12.5	30 - 130	30
Benz(a)anthracene	ND	230	64	67	4.6	56	63	11.8	30 - 130	30
Benzo(a)pyrene	ND	130	64	65	1.6	56	64	13.3	30 - 130	30
Benzo(b)fluoranthene	ND	160	70	75	6.9	69	72	4.3	30 - 130	30
Benzo(ghi)perylene	ND	230	66	69	4.4	63	67	6.2	30 - 130	30
Benzo(k)fluoranthene	ND	230	74	71	4.1	62	73	16.3	30 - 130	30
Chrysene	ND	230	65	70	7.4	59	65	9.7	30 - 130	30
Dibenz(a,h)anthracene	ND	130	71	76	6.8	67	74	9.9	30 - 130	30
Fluoranthene	ND	230	71	72	1.4	58	73	22.9	30 - 130	30
Fluorene	ND	230	67	65	3.0	63	71	11.9	30 - 130	30
Indeno(1,2,3-cd)pyrene	ND	230	67	70	4.4	64	69	7.5	30 - 130	30
Naphthalene	ND	230	55	56	1.8	57	62	8.4	30 - 130	30
Phenanthrene	ND	130	66	68	3.0	63	71	11.9	30 - 130	30
Pyrene	ND	230	71	72	1.4	61	75	20.6	30 - 130	30
% 2-Fluorobiphenyl	51	%	59	59	0.0	60	64	6.5	30 - 130	30
% Nitrobenzene-d5	42	%	52	54	3.8	57	62	8.4	30 - 130	30
% Terphenyl-d14	67	%	65	66	1.5	54	60	10.5	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%)

QA/QC Batch 441636 (ug/kg), QC Sample No: CB04593 (CA99810)

Polynuclear Aromatic HC - Soil

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
2-Methylnaphthalene	ND	230	62	61	1.6	58	64	9.8	30 - 130	30
Acenaphthene	ND	230	66	67	1.5	62	70	12.1	30 - 130	30
Acenaphthylene	ND	230	62	63	1.6	59	66	11.2	30 - 130	30
Anthracene	ND	230	69	68	1.5	65	72	10.2	30 - 130	30
Benz(a)anthracene	ND	230	69	69	0.0	66	73	10.1	30 - 130	30
Benzo(a)pyrene	ND	230	66	65	1.5	63	70	10.5	30 - 130	30
Benzo(b)fluoranthene	ND	230	70	69	1.4	65	73	11.6	30 - 130	30
Benzo(ghi)perylene	ND	230	64	62	3.2	59	66	11.2	30 - 130	30
Benzo(k)fluoranthene	ND	230	70	69	1.4	65	72	10.2	30 - 130	30
Chrysene	ND	230	66	65	1.5	62	67	7.8	30 - 130	30
Dibenz(a,h)anthracene	ND	230	66	65	1.5	61	69	12.3	30 - 130	30
Fluoranthene	ND	230	71	71	0.0	67	76	12.6	30 - 130	30
Fluorene	ND	230	67	68	1.5	64	72	11.8	30 - 130	30
Indeno(1,2,3-cd)pyrene	ND	230	59	58	1.7	56	62	10.2	30 - 130	30
Naphthalene	ND	230	61	59	3.3	57	63	10.0	30 - 130	30
Phenanthrene	ND	230	64	64	0.0	60	67	11.0	30 - 130	30
Pyrene	ND	230	70	71	1.4	68	76	11.1	30 - 130	30
% 2-Fluorobiphenyl	56	%	56	57	1.8	54	60	10.5	30 - 130	30
% Nitrobenzene-d5	41	%	44	48	8.7	45	57	23.5	30 - 130	30
% Terphenyl-d14	60	%	62	62	0.0	60	66	9.5	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%)

QA/QC Data

SDG I.D.: GCA99810

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 441638 (mg/Kg), QC Sample No: CB04621 (CA99810)											
TPH by GC (Extractable Products) - Soil											
Ext. Petroleum H.C. (C9-C36)	ND	50	76	84	10.0	74	94	23.8	60 - 120	30	
% n-Pentacosane	72	%	77	77	0.0	88	88	0.0	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 441761 (ug/Kg), QC Sample No: CB04784 2X (CA99810)											
Pesticides - Soil											
4,4' -DDD	ND	1.7	73	81	10.4	63	59	6.6	40 - 140	30	
4,4' -DDE	ND	1.7	73	78	6.6	64	61	4.8	40 - 140	30	
4,4' -DDT	ND	1.7	77	84	8.7	66	62	6.3	40 - 140	30	
a-BHC	ND	1.0	70	79	12.1	61	60	1.7	40 - 140	30	
Alachlor	ND	3.3	NA	NA	NC	NA	NA	NC	40 - 140	30	
Aldrin	ND	1.0	73	80	9.2	64	60	6.5	40 - 140	30	
b-BHC	ND	1.0	74	81	9.0	65	64	1.6	40 - 140	30	
Chlordane	ND	33	74	83	11.5	65	64	1.6	40 - 140	30	
d-BHC	ND	3.3	74	81	9.0	62	59	5.0	40 - 140	30	
Dieldrin	ND	1.0	76	84	10.0	65	62	4.7	40 - 140	30	
Endosulfan I	ND	3.3	80	91	12.9	68	65	4.5	40 - 140	30	
Endosulfan II	ND	3.3	78	86	9.8	67	64	4.6	40 - 140	30	
Endosulfan sulfate	ND	3.3	74	81	9.0	64	61	4.8	40 - 140	30	
Endrin	ND	3.3	79	88	10.8	69	66	4.4	40 - 140	30	
Endrin aldehyde	ND	3.3	72	79	9.3	63	59	6.6	40 - 140	30	
Endrin ketone	ND	3.3	78	85	8.6	63	67	6.2	40 - 140	30	
g-BHC	ND	1.0	71	80	11.9	62	62	0.0	40 - 140	30	
Heptachlor	ND	3.3	70	80	13.3	63	62	1.6	40 - 140	30	
Heptachlor epoxide	ND	3.3	74	80	7.8	63	62	1.6	40 - 140	30	
Methoxychlor	ND	3.3	79	88	10.8	68	121	56.1	40 - 140	30	r
Toxaphene	ND	130	NA	NA	NC	NA	NA	NC	40 - 140	30	
% DCBP	86	%	74	83	11.5	70	68	2.9	30 - 150	30	
% TCMX	82	%	72	78	8.0	66	65	1.5	30 - 150	30	
QA/QC Batch 441925 (ug/kg), QC Sample No: CB05397 (CA99810)											
Semivolatiles - Soil											
1,2,4,5-Tetrachlorobenzene	ND	230	56	55	1.8	53	54	1.9	30 - 130	30	
1,2,4-Trichlorobenzene	ND	230	63	63	0.0	59	59	0.0	30 - 130	30	
1,2-Dichlorobenzene	ND	180	58	56	3.5	52	53	1.9	30 - 130	30	
1,2-Diphenylhydrazine	ND	230	65	64	1.6	62	58	6.7	30 - 130	30	
1,3-Dichlorobenzene	ND	230	57	56	1.8	50	50	0.0	30 - 130	30	
1,4-Dichlorobenzene	ND	230	56	57	1.8	51	51	0.0	30 - 130	30	
2,4,5-Trichlorophenol	ND	230	70	72	2.8	65	62	4.7	30 - 130	30	
2,4,6-Trichlorophenol	ND	130	66	67	1.5	62	61	1.6	30 - 130	30	
2,4-Dichlorophenol	ND	130	67	64	4.6	62	63	1.6	30 - 130	30	
2,4-Dimethylphenol	ND	230	69	70	1.4	66	68	3.0	30 - 130	30	
2,4-Dinitrophenol	ND	230	<10	17	NC	48	41	15.7	30 - 130	30	l
2,4-Dinitrotoluene	ND	130	71	70	1.4	67	63	6.2	30 - 130	30	
2,6-Dinitrotoluene	ND	130	67	67	0.0	62	60	3.3	30 - 130	30	
2-Chloronaphthalene	ND	230	70	70	0.0	62	60	3.3	30 - 130	30	
2-Chlorophenol	ND	230	59	58	1.7	56	55	1.8	30 - 130	30	
2-Methylnaphthalene	ND	230	60	59	1.7	55	56	1.8	30 - 130	30	
2-Methylphenol (o-cresol)	ND	230	66	63	4.7	64	63	1.6	30 - 130	30	

QA/QC Data

SDG I.D.: GCA99810

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
2-Nitroaniline	ND	330	89	88	1.1	89	88	1.1	30 - 130	30	
2-Nitrophenol	ND	230	64	62	3.2	63	64	1.6	30 - 130	30	
3&4-Methylphenol (m&p-cresol)	ND	230	64	61	4.8	60	60	0.0	30 - 130	30	
3,3'-Dichlorobenzidine	ND	130	66	66	0.0	66	67	1.5	30 - 130	30	
3-Nitroaniline	ND	330	81	76	6.4	72	72	0.0	30 - 130	30	
4,6-Dinitro-2-methylphenol	ND	230	19	38	66.7	60	48	22.2	30 - 130	30	l,r
4-Bromophenyl phenyl ether	ND	230	67	64	4.6	58	60	3.4	30 - 130	30	
4-Chloro-3-methylphenol	ND	230	67	68	1.5	65	65	0.0	30 - 130	30	
4-Chloroaniline	ND	230	73	68	7.1	61	70	13.7	30 - 130	30	
4-Chlorophenyl phenyl ether	ND	230	68	67	1.5	62	60	3.3	30 - 130	30	
4-Nitroaniline	ND	230	68	68	0.0	64	63	1.6	30 - 130	30	
4-Nitrophenol	ND	230	55	56	1.8	94	87	7.7	30 - 130	30	
Acenaphthene	ND	230	70	71	1.4	64	61	4.8	30 - 130	30	
Acenaphthylene	ND	130	67	68	1.5	54	47	13.9	30 - 130	30	
Acetophenone	ND	230	57	56	1.8	51	53	3.8	30 - 130	30	
Aniline	ND	330	58	51	12.8	52	49	5.9	30 - 130	30	
Anthracene	ND	230	69	70	1.4	59	55	7.0	30 - 130	30	
Benz(a)anthracene	ND	230	68	69	1.5	47	46	2.2	30 - 130	30	
Benzidine	ND	330	55	55	0.0	23	34	38.6	30 - 130	30	m,r
Benzo(a)pyrene	ND	130	67	68	1.5	49	41	17.8	30 - 130	30	
Benzo(b)fluoranthene	ND	160	68	71	4.3	54	49	9.7	30 - 130	30	
Benzo(ghi)perylene	ND	230	64	67	4.6	55	43	24.5	30 - 130	30	
Benzo(k)fluoranthene	ND	230	74	73	1.4	49	43	13.0	30 - 130	30	
Benzoic Acid	ND	330	<10	10	NC	<10	22	NC	30 - 130	30	l,m
Benzyl butyl phthalate	ND	230	73	67	8.6	63	64	1.6	30 - 130	30	
Bis(2-chloroethoxy)methane	ND	230	68	67	1.5	61	63	3.2	30 - 130	30	
Bis(2-chloroethyl)ether	ND	130	52	52	0.0	53	55	3.7	30 - 130	30	
Bis(2-chloroisopropyl)ether	ND	230	54	51	5.7	47	49	4.2	30 - 130	30	
Bis(2-ethylhexyl)phthalate	ND	230	76	69	9.7	64	66	3.1	30 - 130	30	
Carbazole	ND	230	69	69	0.0	64	61	4.8	30 - 130	30	
Chrysene	ND	230	70	72	2.8	45	41	9.3	30 - 130	30	
Dibenz(a,h)anthracene	ND	130	69	69	0.0	63	64	1.6	30 - 130	30	
Dibenzofuran	ND	230	68	69	1.5	60	58	3.4	30 - 130	30	
Diethyl phthalate	ND	230	71	70	1.4	63	62	1.6	30 - 130	30	
Dimethylphthalate	ND	230	70	71	1.4	64	61	4.8	30 - 130	30	
Di-n-butylphthalate	ND	670	73	70	4.2	64	63	1.6	30 - 130	30	
Di-n-octylphthalate	ND	230	77	72	6.7	66	68	3.0	30 - 130	30	
Fluoranthene	ND	230	67	70	4.4	42	36	15.4	30 - 130	30	
Fluorene	ND	230	70	71	1.4	66	62	6.3	30 - 130	30	
Hexachlorobenzene	ND	130	67	64	4.6	61	60	1.7	30 - 130	30	
Hexachlorobutadiene	ND	230	61	60	1.7	56	56	0.0	30 - 130	30	
Hexachlorocyclopentadiene	ND	230	55	53	3.7	46	37	21.7	30 - 130	30	
Hexachloroethane	ND	130	54	54	0.0	47	48	2.1	30 - 130	30	
Indeno(1,2,3-cd)pyrene	ND	230	67	70	4.4	57	49	15.1	30 - 130	30	
Isophorone	ND	130	60	58	3.4	55	55	0.0	30 - 130	30	
Naphthalene	ND	230	65	65	0.0	61	60	1.7	30 - 130	30	
Nitrobenzene	ND	130	63	62	1.6	59	62	5.0	30 - 130	30	
N-Nitrosodimethylamine	ND	230	61	58	5.0	55	53	3.7	30 - 130	30	
N-Nitrosodi-n-propylamine	ND	130	65	63	3.1	59	63	6.6	30 - 130	30	
N-Nitrosodiphenylamine	ND	130	71	69	2.9	64	62	3.2	30 - 130	30	
Pentachloronitrobenzene	ND	230	61	59	3.3	57	56	1.8	30 - 130	30	
Pentachlorophenol	ND	230	55	46	17.8	55	53	3.7	30 - 130	30	
Phenanthrene	ND	130	68	69	1.5	54	52	3.8	30 - 130	30	

QA/QC Data

SDG I.D.: GCA99810

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Phenol	ND	230	64	58	9.8	63	60	4.9	30 - 130	30
Pyrene	ND	230	69	72	4.3	41	33	21.6	30 - 130	30
Pyridine	ND	230	48	50	4.1	38	37	2.7	30 - 130	30
% 2,4,6-Tribromophenol	58	%	61	59	3.3	60	58	3.4	30 - 130	30
% 2-Fluorobiphenyl	62	%	62	63	1.6	55	53	3.7	30 - 130	30
% 2-Fluorophenol	55	%	55	55	0.0	58	56	3.5	30 - 130	30
% Nitrobenzene-d5	56	%	54	53	1.9	53	54	1.9	30 - 130	30
% Phenol-d5	57	%	59	58	1.7	60	57	5.1	30 - 130	30
% Terphenyl-d14	61	%	62	62	0.0	59	56	5.2	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%)

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
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
August 10, 2018

Friday, August 10, 2018

Criteria: CT: GBM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCA99810 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CA99810	$8270-SMR	Benzidine	CT / RSR DEC I/C (mg/kg) / APS Organics	ND	270	200	200	ug/Kg
CA99810	$8270-SMR	Dibenz(a,h)anthracene	CT / RSR DEC I/C (mg/kg) / APS Organics	1300	480	1000	1000	ug/Kg
CA99810	$8270-SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	6000	480	1000	1000	ug/Kg
CA99810	$8270-SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	5400	480	1000	1000	ug/Kg
CA99810	$8270-SMR	Benzidine	CT / RSR DEC RES (mg/kg) / APS Organics	ND	270	200	200	ug/Kg
CA99810	$8270-SMR	Dibenz(a,h)anthracene	CT / RSR DEC RES (mg/kg) / APS Organics	1300	480	1000	1000	ug/Kg
CA99810	$8270-SMR	N-Nitrosodi-n-propylamine	CT / RSR DEC RES (mg/kg) / APS Organics	ND	220	200	200	ug/Kg
CA99810	$8270-SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	6000	480	1000	1000	ug/Kg
CA99810	$8270-SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	4800	480	1000	1000	ug/Kg
CA99810	$8270-SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	5000	480	1000	1000	ug/Kg
CA99810	$8270-SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	5400	480	1000	1000	ug/Kg
CA99810	$8270-SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	5400	480	1000	1000	ug/Kg
CA99810	$8270-SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	5400	480	1000	1000	ug/Kg
CA99810	$8270-SMR	Dibenz(a,h)anthracene	CT / RSR GB (mg/kg) / APS Organics	1300	480	1000	1000	ug/Kg
CA99810	$8270-SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	4100	480	1000	1000	ug/Kg
CA99810	$8270-SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	5000	480	1000	1000	ug/Kg
CA99810	$8270-SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	6000	480	1000	1000	ug/Kg
CA99810	$8270-SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	4800	480	1000	1000	ug/Kg
CA99810	$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR DEC RES (mg/kg) / Pest/PCB/TPH	520	520	500	500	mg/Kg
CA99811	$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC I/C (mg/kg) / APS Organics	1100	250	1000	1000	ug/Kg
CA99811	$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	5900	250	1000	1000	ug/Kg
CA99811	$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC RES (mg/kg) / APS Organics	1100	250	1000	1000	ug/Kg
CA99811	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	4000	250	1000	1000	ug/Kg
CA99811	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	2800	250	1000	1000	ug/Kg
CA99811	$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	5900	250	1000	1000	ug/Kg
CA99811	$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	4000	250	1000	1000	ug/Kg
CA99811	$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	2600	250	1000	1000	ug/Kg
CA99811	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	4000	250	1000	1000	ug/Kg
CA99811	$8100SMR	Dibenz(a,h)anthracene	CT / RSR GB (mg/kg) / APS Organics	1100	250	1000	1000	ug/Kg
CA99811	$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	2800	250	1000	1000	ug/Kg
CA99811	$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	5900	250	1000	1000	ug/Kg
CA99811	$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	2400	250	1000	1000	ug/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 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.

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

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

Project Location: ROCKVILLE MGP ***Project Number:***

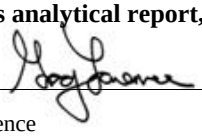
Laboratory Sample ID(s): CA99811, CA99812 ***Sampling Date(s):*** 7/27/2018

List RCP Methods Used (e.g., 8260, 8270, et cetera) 8081, 8260, 8270, ETPH, 9010/9012

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	***VPH and EPH methods only:*** **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 Reasonable Confidence Protocol documents acheived? See Sections: SVOA Narration, VOA Narration.**	☐ Yes ☑ No
5	**a) Were reporting limits specified or referenced on the chain-of-custody?** **b) Were these reporting limits met?**	☑ Yes ☐ No ☐ 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 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, August 10, 2018

Name of Laboratory Phoenix Environmental Labs, Inc.

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

CTDEP RCP Laboratory Analysis QA/QC Certification Form - November 2007
Laboratory Quality Assurance and Quality Control Guidance Reasonable Confidence Protocols

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

August 10, 2018

SDG I.D.: GCA99810

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.

Cyanide Narration

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

Instrument:

LACHAT 07/30/18-1 Dustin Harrison, Greg Danielewski, Chemist 07/30/18

CA99811, CA99812

The samples were distilled in accordance with the method.
The initial calibration met criteria.

The calibration check standards (ICV,CCV) were within 15% of true value and were analyzed at a frequencey of one per ten samples.
The continuing calibration blanks (ICB,CCB) had concentrations less than the reporting level.

The method blank, laboratory control sample (LCS), and matrix spike were distilled with the samples.

QC (Batch Specific):

Batch 440828 (CA99729)

CA99811, CA99812

All LCS recoveries were within 80 - 120 with the following exceptions: None.
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils

ETPH Narration

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

Instrument:

AU-FID1 08/03/18-1 Jeff Bucko, Chemist 08/03/18

CA99810

The initial calibration (ETPH723I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-FID22 07/30/18-1 Jeff Bucko, Chemist 07/30/18

CA99811

The initial calibration (ETPH621I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-XL2 07/27/18-1 Jeff Bucko, Chemist 07/27/18

CA99812

The initial calibration (ETPH705I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-XL2 08/02/18-1 Jeff Bucko, Chemist 08/02/18

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

August 10, 2018

SDG I.D.: GCA99810

ETPH Narration

CA99813

The initial calibration (ETPH801I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 440643 (CA99145)

CA99811, CA99812

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.

Batch 441638 (CB04621)

CA99810

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.

QC (Site Specific):

Batch 441491 (CA99813)

CA99813

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.
All MS recoveries were within 50 - 150 with the following exceptions: None.
All MSD recoveries were within 50 - 150 with the following exceptions: None.
All MS/MSD 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.

PEST Narration

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

Instrument:

AU-ECD35 08/08/18-1 Carol Wohlmuth, Chemist 08/08/18

CA99810

The initial calibration (PS808AI) RSD for the compound list was less than 20% except for the following compounds: None.
The initial calibration (PS808BI) RSD for the compound list was less than 20% except for the following compounds: None.
The Endrin and DDT breakdown does not exceed 15% except for the following compounds:None.
The Endrin and DDT breakdown does not exceed the maximum of 20% except for the following compounds:None.
The continuing calibration %D for the compound list was less than 20% except for the following compounds:None.

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

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RCP Certification Report

August 10, 2018

SDG I.D.: GCA99810

PEST Narration

QC (Batch Specific):

Batch 441761 (CB04784)

CA99810

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? No.

QC Batch 441925 (Samples: CA99810): -----

The LCS/LCSD recovery is below the method criteria. A low bias for this analyte is possible. (2,4-Dinitrophenol)

The LCS recovery is below the lower range but within the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (4,6-Dinitro-2-methylphenol)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (4,6-Dinitro-2-methylphenol)

The QC recoveries for one or more analytes is below the method criteria. A low bias is likely. (Benzoic Acid)

Instrument:

CHEM05 08/08/18-1 Harry Mullin, Chemist 08/08/18

CA99810

Initial Calibration Verification (CHEM05/SPLIT_0803):
91% of target compounds met criteria.
The following compounds had %RSDs >20%: 2,4-Dinitrophenol 47% (20%), 2-Nitrophenol 21% (20%), 4,6-Dinitro-2-methylphenol 25% (20%), 4-Chloroaniline 28% (20%), 4-Nitrophenol 36% (20%), Naphthalene 25% (20%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM05/0808_02-SPLIT_0803):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Hexachlorocyclopentadiene 32%L (30%), Pentachlorophenol 32%L (30%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.097 (0.1)
The following compounds did not meet minimum response factors: None.

CHEM07 08/05/18-1 Matt Richard, Chemist 08/05/18

CA99813

The DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

Initial Calibration Verification (CHEM07/bn_0802):

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NY # 11301

RCP Certification Report

August 10, 2018

SDG I.D.: GCA99810

SVOA Narration

95% of target compounds met criteria.
The following compounds had %RSDs >20%: Benzo(a)pyrene 24% (20%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM07/0805_02A-bn_0802):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: % Nitrobenzene-d5 32%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.

CHEM29 07/30/18-2 Matt Richard, Chemist 07/30/18

CA99811, CA99812

Initial Calibration Verification (CHEM29/BN_0726):
85% of target compounds met criteria.
The following compounds had %RSDs >20%: Acenaphthene 39% (20%), Benz(a)anthracene 40% (20%), Chrysene 40% (20%)
The following compounds did not meet recommended response factors: Acenaphthene 0.885 (0.9)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM29/0730_25-BN_0726):
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 440862 (CA99355)

CA99811, CA99812

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%)

Batch 441524 (CB03983)

CA99813

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%)

Batch 441636 (CB04593)

CA99810

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RCP Certification Report

August 10, 2018

SDG I.D.: GCA99810

SVOA Narration

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%)

Batch 441925 (CB05397)

CA99810

All LCS recoveries were within 30 - 130 with the following exceptions: 2,4-Dinitrophenol(<10%), 4,6-Dinitro-2-methylphenol(19%), Benzoic Acid(<10%)
All LCSD recoveries were within 30 - 130 with the following exceptions: 2,4-Dinitrophenol(17%), Benzoic Acid(10%)
All LCS/LCSD RPDs were less than 30% with the following exceptions: 4,6-Dinitro-2-methylphenol(66.7%)
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%)

VOA Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? No.

QC Batch 441911 (Samples: CA99813): -----

The LCSD and Batch MS/MSD recovery is below the lower range but within the method criteria. A low bias is possible. (Acetone)

Instrument:

CHEM03 07/29/18-1 Jane Li, Chemist 07/29/18

CA99811, CA99812

Initial Calibration Verification (CHEM03/VT-L0726):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: Acetone 25% (20%), Bromoform 26% (20%), Chloroethane 27% (20%)
The following compounds did not meet recommended response factors: Acetone 0.075 (0.1)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM03/0729L02-VT-L0726):
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.

CHEM14 07/30/18-3 Jane Li, Chemist 07/30/18

CA99812

Initial Calibration Verification (CHEM14/VT-0730):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Acetone 22% (20%), Chloroethane 21% (20%)
The following compounds did not meet recommended response factors: Acetone 0.090 (0.1)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM14/0730_45-VT-0730):

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RCP Certification Report

August 10, 2018

SDG I.D.: GCA99810

VOA Narration

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.

CHEM18 08/03/18-1 Jane Li, Chemist 08/03/18

CA99813

Initial Calibration Verification (CHEM18/VT-M0723):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: Acetone 21% (20%), trans-1,4-dichloro-2-butene 21% (20%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM18/0803M02-VT-M0723):
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 440895 (CA99902)

CA99811, CA99812

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Batch 441070 (CB00642)

CA99812

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Batch 441911 (CB02227)

CA99813

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: Acetone(69%)
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Temperature Narration

The samples in this delivery group were received at 3.2°C.

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Tel. (860) 645-1102 Fax (860) 645-0823

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RCP Certification Report

August 10, 2018

SDG I.D.: GCA99810

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

Cooler: Yes ☒ No ☐
Coolant: IPK ☐ ICE ☒ No ☐
Temp 3.2 °C Pg 1 of 1

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

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

Contact Options:
☐ Fax:
☐ Phone:
☒ Email: LEWiley@tylerbond.com

Customer: Tighe & Bond
Address: 213 Court St Suite 1100 Middletown CT

Project: Riverwalk MGP
Report to: Lynn Wiley
Invoice to: Tighe & Bond

Project P.O: 14-0755-4413

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 7/27/18

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

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOC	PAHs	1-TCLP	Flash Cyanide	Soil VOA Vials [ ]methanol [☒] H2O	GL Soil container (8) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 1500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 1500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle
99810	SB-29 (3-5 ft)	S	7/27/18	9:30					3	1								
99811	SB-29 (14-16 ft)			9:40	X	X	X	X	3	1								
99812	SB-54 (2-3 ft)			11:50	X	X	X	X	3	1								
99813	SB-54 (22-24 ft)			12:15					3	1								

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	72718	7/27/18

Comments, Special Requirements or Regulations:
Please hold SB-29 (3-5 ft) + SB-54 (22-24 ft)
DAS pricing
quote TI0125178A

Turnaround:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☒ Standard
☐ Other
* SURCHARGE APPLIES

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☒ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☒ GB Mobility
☒ Residential DEC
☒ I/C DEC
☐ Other

MA
☐ MCP Certification
☐ GW-1
☐ GW-2
☐ GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: CT

Data Format
☒ Excel
☒ PDF
☐ GIS/Key
☐ EQuIS
☒ Other Geotech

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☒ Phoenix Std Report
☐ Other
* SURCHARGE APPLIES

The Connecticut Light and Power Company
d/b/a Eversource Energy
Docket No. 26-05-10
Date Issued September 29, 2026
RSR-032 Attachment 17
Page 615 of 1282

Client Services

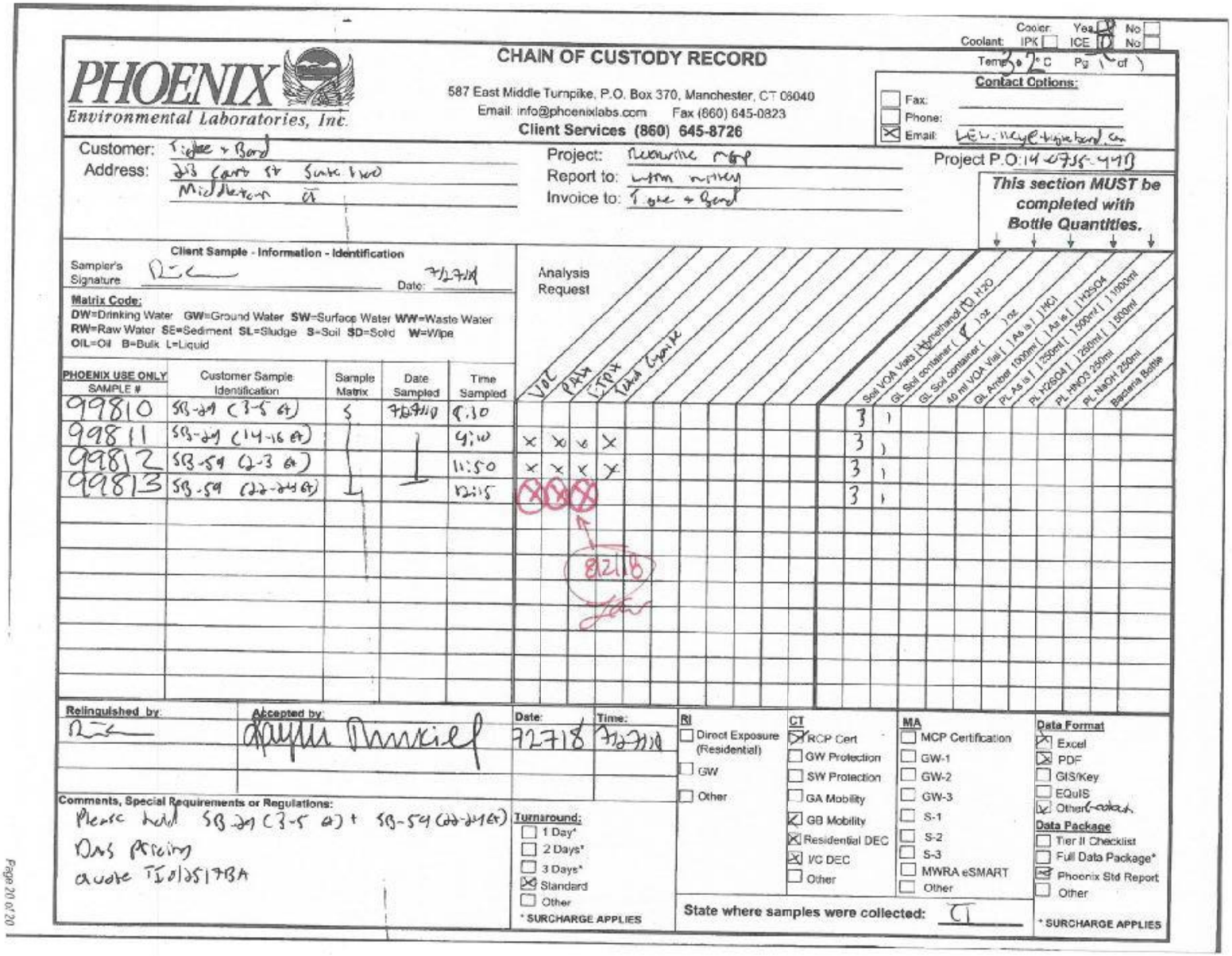
From: Lynn E. Willey <LEWilley@tighebond.com>
Sent: Thursday, August 02, 2018 1:21 PM
To: Client Services
Subject: Activate SB-59 22-24
Attachments: SB-59 Activation.pdf

Hi there:

Please activate SB-59 22-24 (99813)

Thank You

Lynn E. Willey, P.G., LEP | Senior Environmental Scientist
Tighe & Bond | 213 Court Street Suite 1100 | Middletown, CT 06457
| 860.852.5214 | 860-729-7502 (cell)
www.tighebond.com | Follow us on: Twitter Facebook LinkedIn



PHOENIX Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

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

Cooler: Yes ☒ No ☐
Coolant: IPK ☐ ICE ☒ No ☐
Temp 3.2 °C Pg 1 of 1

Contact Options:
☐ Fax:
☐ Phone:
☒ Email: [illegible]

Customer: Tighe + Bond
Address: 213 Court St Suite 1100
Middletown CT

Project: Riverside MGP
Report to: Lynn Miller
Invoice to: Tighe + Bond

Project P.O.: 14-0735-4413

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 7/27/18

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

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOC	PAH	LTPX	Total Cyanide	Soil VOA Vials [ ]Methanol [☒] H2O	GL Soil container (8) 1oz	GL Soil container ( ) 2oz	40 ml VOA Vials [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml [ ] 1000ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle
99810	SB-59 (3-5 ft)	S	7/27/18	8:30						3	1							
99811	SB-59 (14-16 ft)			9:10	X	X	X	X		3	1							
99812	SB-54 (2-3 ft)			11:50	X	X	X	X		3	1							
99813	SB-59 (22-24 ft)			12:15	X	X	X	X		3	1							

[illegible] 8270 [illegible]

Relinquished by: [signature] Accepted by: [signature] Date: 72718 Time: 7:27:18

Comments, Special Requirements or Regulations:
Please hold SB-59 (3-5 ft) + SB-54 (22-24 ft)
DNS Pricing
quote TIO125178A

Turnaround:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☒ Standard
☐ Other
* SURCHARGE APPLIES

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☒ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☒ GB Mobility
☒ Residential DEC
☒ I/C DEC
☐ Other

MA
☐ MCP Certification
☐ GW-1
☐ GW-2
☐ GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: CT

Data Format
☒ Excel
☒ PDF
☐ GIS/Key
☐ EQuIS
☒ Other [illegible]

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☒ Phoenix Std Report
☐ Other
* SURCHARGE APPLIES

Page 20 of 20

Sarah Bell

From: Benjamin P. Caswell <BCaswell@tighebond.com>
Sent: Friday, August 03, 2018 10:27 AM
To: Sarah Bell
Subject: Rockville MGP sample additions and prelim data

Good morning Sarah,

Can you please make the following changes:

SB-29 (3-5 ft) [99810]: Change PAH to SVOC
SB-30 (2-4 ft) [98807]: Add total cyanide
SB-32 (2-4 ft) [96215]: Add SPLP RCP Metals

Also is there any preliminary metals data available for GCA98805, GCA99810 and/or GCA 98174? We need to select some additional samples for SPLP metals within those delivery groups. I am also looking for ETPH data from GCA9817 so we can select two samples for PCB analysis.

Thank you!
Ben

Benjamin Caswell | Environmental Scientist
Tighe&Bond | 213 Court St., Suite 1100 | Middletown, CT 06457 | 860.852.5220 | 401.787.0905 (cell)
www.tighebond.com | Follow us on: Twitter Facebook LinkedIn



Sarah Bell

From: Benjamin P. Caswell <BCaswell@tighebond.com>
Sent: Friday, August 03, 2018 10:27 AM
To: Sarah Bell
Subject: Rockville MGP sample additions and prelim data

Good morning Sarah,

Can you please make the following changes:

SB-29 (3-5 ft) [99810]: Change PAH to SVOC
SB-30 (2-4 ft) [98807]: Add total cyanide
SB-32 (2-4 ft) [96215]: Add SPLP RCP Metals

Also is there any preliminary metals data available for GCA98805, GCA99810 and/or GCA 98174? We need to select some additional samples for SPLP metals within those delivery groups. I am also looking for ETPH data from GCA9817 so we can select two samples for PCB analysis.

Thank you!
Ben

Benjamin Caswell | Environmental Scientist
Tighe&Bond | 213 Court St., Suite 1100 | Middletown, CT 06457 | 860.852.5220 | 401.787.0905 (cell)
www.tighebond.com | Follow us on: Twitter Facebook LinkedIn



PHOENIX
Environmental Laboratories, Inc.

Monday, August 13, 2018

Attn: Ms. Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Project ID: ROCKVILLE MGP
Sample ID#s: CB01075

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.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

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 06040
Telephone (860) 645-1102 Fax (860) 645-0823

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

Analysis Report

August 13, 2018

FOR: Attn: Ms. Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		07/30/18	11:00
Location Code:	TIGHE-DAS	Received by:	LB	07/30/18	16:05
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCB01074
Phoenix ID: CB01075

Project ID: ROCKVILLE MGP
Client ID: SB-64 (38.5-40 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	86		%		07/30/18	Q	SW846-%Solid
Soil Extraction SVOA PAH	Completed				07/31/18	?/CKV	SW3545A
Extraction of CT ETPH	Completed				07/30/18	JJ/VCK	SW3545A
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	58	mg/Kg	1	07/31/18	JRB	CTETPH 8015D
Identification	ND		mg/Kg	1	07/31/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	71		%	1	07/31/18	JRB	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.6	ug/Kg	1	07/31/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
1,1-Dichloroethane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
1,1-Dichloroethene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
1,1-Dichloropropene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
1,2-Dibromoethane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
1,2-Dichloroethane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
1,2-Dichloropropane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-64 (38.5-40 FT)

Phoenix I.D.: CB01075

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
1,3-Dichloropropane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
2,2-Dichloropropane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
2-Chlorotoluene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
2-Hexanone	ND	22	ug/Kg	1	07/31/18	JLI	SW8260C
2-Isopropyltoluene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
4-Chlorotoluene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	22	ug/Kg	1	07/31/18	JLI	SW8260C
Acetone	ND	220	ug/Kg	1	07/31/18	JLI	SW8260C
Acrylonitrile	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Benzene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Bromobenzene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Bromochloromethane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Bromodichloromethane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Bromoform	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Bromomethane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Carbon Disulfide	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Carbon tetrachloride	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Chlorobenzene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Chloroethane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Chloroform	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Chloromethane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Dibromochloromethane	ND	2.6	ug/Kg	1	07/31/18	JLI	SW8260C
Dibromomethane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Dichlorodifluoromethane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Ethylbenzene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Hexachlorobutadiene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Isopropylbenzene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
m&p-Xylene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	26	ug/Kg	1	07/31/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	8.7	ug/Kg	1	07/31/18	JLI	SW8260C
Methylene chloride	ND	8.7	ug/Kg	1	07/31/18	JLI	SW8260C
Naphthalene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
n-Butylbenzene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
n-Propylbenzene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
o-Xylene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
p-Isopropyltoluene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
sec-Butylbenzene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Styrene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
tert-Butylbenzene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Tetrachloroethene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	8.7	ug/Kg	1	07/31/18	JLI	SW8260C
Toluene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Total Xylenes	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-64 (38.5-40 FT)

Phoenix I.D.: CB01075

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,4-dichloro-2-butene	ND	8.7	ug/Kg	1	07/31/18	JLI	SW8260C
Trichloroethene	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Trichlorofluoromethane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
Vinyl chloride	ND	4.4	ug/Kg	1	07/31/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	07/31/18	JLI	70 - 130 %
% Bromofluorobenzene	95		%	1	07/31/18	JLI	70 - 130 %
% Dibromofluoromethane	101		%	1	07/31/18	JLI	70 - 130 %
% Toluene-d8	101		%	1	07/31/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	ND	270	ug/Kg	1	08/01/18	HM	SW8270D
Acenaphthene	ND	270	ug/Kg	1	08/01/18	HM	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	08/01/18	HM	SW8270D
Anthracene	ND	270	ug/Kg	1	08/01/18	HM	SW8270D
Benz(a)anthracene	ND	270	ug/Kg	1	08/01/18	HM	SW8270D
Benzo(a)pyrene	ND	270	ug/Kg	1	08/01/18	HM	SW8270D
Benzo(b)fluoranthene	ND	270	ug/Kg	1	08/01/18	HM	SW8270D
Benzo(ghi)perylene	ND	270	ug/Kg	1	08/01/18	HM	SW8270D
Benzo(k)fluoranthene	ND	270	ug/Kg	1	08/01/18	HM	SW8270D
Chrysene	ND	270	ug/Kg	1	08/01/18	HM	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	08/01/18	HM	SW8270D
Fluoranthene	ND	270	ug/Kg	1	08/01/18	HM	SW8270D
Fluorene	ND	270	ug/Kg	1	08/01/18	HM	SW8270D
Indeno(1,2,3-cd)pyrene	ND	270	ug/Kg	1	08/01/18	HM	SW8270D
Naphthalene	ND	270	ug/Kg	1	08/01/18	HM	SW8270D
Phenanthrene	ND	270	ug/Kg	1	08/01/18	HM	SW8270D
Pyrene	ND	270	ug/Kg	1	08/01/18	HM	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	66		%	1	08/01/18	HM	30 - 130 %
% Nitrobenzene-d5	66		%	1	08/01/18	HM	30 - 130 %
% Terphenyl-d14	56		%	1	08/01/18	HM	30 - 130 %
Field Extraction	Completed				07/30/18		SW5035A

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 there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
August 13, 2018
Reviewed and Released by: Sarah Bell, Project Manager

Ver 2

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

QA/QC Report

August 13, 2018

QA/QC Data

SDG I.D.: GCB01074

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 440912 (mg/Kg), QC Sample No: CB00372 (CB01075)											
TPH by GC (Extractable Products) - Soil											
Ext. Petroleum H.C. (C9-C36)	ND	50	83	84	1.2	110	95	14.6	60 - 120	30	
% n-Pentacosane	81	%	72	66	8.7	77	81	5.1	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 441089 (ug/kg), QC Sample No: CB00372 (CB01075)											
Volatiles - Soil											
1,1,1,2-Tetrachloroethane	ND	5.0	112	112	0.0	104	104	0.0	70 - 130	30	
1,1,1-Trichloroethane	ND	5.0	103	103	0.0	99	100	1.0	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	3.0	108	108	0.0	111	102	8.5	70 - 130	30	
1,1,2-Trichloroethane	ND	5.0	105	107	1.9	96	95	1.0	70 - 130	30	
1,1-Dichloroethane	ND	5.0	108	109	0.9	109	108	0.9	70 - 130	30	
1,1-Dichloroethene	ND	5.0	104	100	3.9	103	103	0.0	70 - 130	30	
1,1-Dichloropropene	ND	5.0	104	105	1.0	101	101	0.0	70 - 130	30	
1,2,3-Trichlorobenzene	ND	5.0	105	107	1.9	101	105	3.9	70 - 130	30	
1,2,3-Trichloropropane	ND	5.0	104	104	0.0	113	100	12.2	70 - 130	30	
1,2,4-Trichlorobenzene	ND	5.0	106	107	0.9	101	107	5.8	70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	103	104	1.0	100	97	3.0	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	107	108	0.9	94	99	5.2	70 - 130	30	
1,2-Dibromoethane	ND	5.0	109	109	0.0	97	98	1.0	70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	103	104	1.0	85	104	20.1	70 - 130	30	
1,2-Dichloroethane	ND	5.0	108	108	0.0	102	103	1.0	70 - 130	30	
1,2-Dichloropropane	ND	5.0	106	106	0.0	101	100	1.0	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	103	103	0.0	105	97	7.9	70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	104	104	0.0	89	101	12.6	70 - 130	30	
1,3-Dichloropropane	ND	5.0	108	108	0.0	102	102	0.0	70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	103	103	0.0	88	102	14.7	70 - 130	30	
2,2-Dichloropropane	ND	5.0	106	105	0.9	101	109	7.6	70 - 130	30	
2-Chlorotoluene	ND	5.0	104	104	0.0	104	97	7.0	70 - 130	30	
2-Hexanone	ND	25	89	90	1.1	83	86	3.6	70 - 130	30	
2-Isopropyltoluene	ND	5.0	105	105	0.0	100	100	0.0	70 - 130	30	
4-Chlorotoluene	ND	5.0	104	105	1.0	99	97	2.0	70 - 130	30	
4-Methyl-2-pentanone	ND	25	99	102	3.0	94	49	62.9	70 - 130	30	m,r
Acetone	ND	10	83	86	3.6	72	65	10.2	70 - 130	30	m
Acrylonitrile	ND	5.0	100	99	1.0	96	49	64.8	70 - 130	30	m,r
Benzene	ND	1.0	105	105	0.0	99	99	0.0	70 - 130	30	
Bromobenzene	ND	5.0	106	107	0.9	106	101	4.8	70 - 130	30	
Bromochloromethane	ND	5.0	109	123	12.1	109	130	17.6	70 - 130	30	
Bromodichloromethane	ND	5.0	109	110	0.9	99	99	0.0	70 - 130	30	
Bromoform	ND	5.0	112	113	0.9	94	93	1.1	70 - 130	30	
Bromomethane	ND	5.0	103	107	3.8	101	100	1.0	70 - 130	30	

QA/QC Data

SDG I.D.: GCB01074

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Carbon Disulfide	ND	5.0	106	104	1.9	99	98	1.0	70 - 130	30	
Carbon tetrachloride	ND	5.0	101	101	0.0	97	97	0.0	70 - 130	30	
Chlorobenzene	ND	5.0	106	106	0.0	99	99	0.0	70 - 130	30	
Chloroethane	ND	5.0	107	107	0.0	114	120	5.1	70 - 130	30	
Chloroform	ND	5.0	113	116	2.6	109	112	2.7	70 - 130	30	
Chloromethane	ND	5.0	103	102	1.0	93	93	0.0	70 - 130	30	
cis-1,2-Dichloroethene	ND	5.0	109	110	0.9	102	99	3.0	70 - 130	30	
cis-1,3-Dichloropropene	ND	5.0	108	108	0.0	81	79	2.5	70 - 130	30	
Dibromochloromethane	ND	3.0	114	115	0.9	103	103	0.0	70 - 130	30	
Dibromomethane	ND	5.0	107	107	0.0	100	99	1.0	70 - 130	30	
Dichlorodifluoromethane	ND	5.0	111	110	0.9	105	105	0.0	70 - 130	30	
Ethylbenzene	ND	1.0	106	105	0.9	102	102	0.0	70 - 130	30	
Hexachlorobutadiene	ND	5.0	109	110	0.9	74	111	40.0	70 - 130	30	r
Isopropylbenzene	ND	1.0	101	102	1.0	111	95	15.5	70 - 130	30	
m&p-Xylene	ND	2.0	104	105	1.0	99	99	0.0	70 - 130	30	
Methyl ethyl ketone	ND	5.0	93	95	2.1	88	52	51.4	70 - 130	30	m,r
Methyl t-butyl ether (MTBE)	ND	1.0	104	103	1.0	104	103	1.0	70 - 130	30	
Methylene chloride	ND	5.0	96	95	1.0	95	95	0.0	70 - 130	30	
Naphthalene	ND	5.0	106	107	0.9	97	100	3.0	70 - 130	30	
n-Butylbenzene	ND	1.0	104	104	0.0	85	98	14.2	70 - 130	30	
n-Propylbenzene	ND	1.0	103	103	0.0	107	96	10.8	70 - 130	30	
o-Xylene	ND	2.0	105	106	0.9	97	98	1.0	70 - 130	30	
p-Isopropyltoluene	ND	1.0	103	105	1.9	91	100	9.4	70 - 130	30	
sec-Butylbenzene	ND	1.0	105	106	0.9	103	100	3.0	70 - 130	30	
Styrene	ND	5.0	106	106	0.0	103	56	59.1	70 - 130	30	m,r
tert-Butylbenzene	ND	1.0	103	103	0.0	106	96	9.9	70 - 130	30	
Tetrachloroethene	ND	5.0	103	106	2.9	100	97	3.0	70 - 130	30	
Tetrahydrofuran (THF)	ND	5.0	100	101	1.0	96	95	1.0	70 - 130	30	
Toluene	ND	1.0	104	106	1.9	97	97	0.0	70 - 130	30	
trans-1,2-Dichloroethene	ND	5.0	111	109	1.8	108	107	0.9	70 - 130	30	
trans-1,3-Dichloropropene	ND	5.0	105	105	0.0	84	82	2.4	70 - 130	30	
trans-1,4-dichloro-2-butene	ND	5.0	110	111	0.9	79	95	18.4	70 - 130	30	
Trichloroethene	ND	5.0	105	109	3.7	103	102	1.0	70 - 130	30	
Trichlorofluoromethane	ND	5.0	98	97	1.0	101	103	2.0	70 - 130	30	
Trichlorotrifluoroethane	ND	5.0	101	102	1.0	107	104	2.8	70 - 130	30	
Vinyl chloride	ND	5.0	107	108	0.9	109	108	0.9	70 - 130	30	
% 1,2-dichlorobenzene-d4	100	%	100	101	1.0	99	100	1.0	70 - 130	30	
% Bromofluorobenzene	96	%	101	101	0.0	92	101	9.3	70 - 130	30	
% Dibromofluoromethane	104	%	103	101	2.0	103	103	0.0	70 - 130	30	
% Toluene-d8	100	%	100	101	1.0	99	98	1.0	70 - 130	30	

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 441062 (ug/kg), QC Sample No: CB01501 (CB01075)

Polynuclear Aromatic HC - Soil

2-Methylnaphthalene	ND	230	67	68	1.5	77	67	13.9	30 - 130	30	
Acenaphthene	ND	230	73	75	2.7	76	61	21.9	30 - 130	30	
Acenaphthylene	ND	230	67	68	1.5	NC	NC	NC	30 - 130	30	
Anthracene	ND	230	75	74	1.3	NC	NC	NC	30 - 130	30	
Benz(a)anthracene	ND	230	75	75	0.0	NC	NC	NC	30 - 130	30	
Benzo(a)pyrene	ND	230	73	74	1.4	NC	NC	NC	30 - 130	30	
Benzo(b)fluoranthene	ND	230	77	77	0.0	NC	NC	NC	30 - 130	30	
Benzo(ghi)perylene	ND	230	70	70	0.0	NC	NC	NC	30 - 130	30	

QA/QC Data

SDG I.D.: GCB01074

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzo(k)fluoranthene	ND	230	74	74	0.0	NC	NC	NC	30 - 130	30	
Chrysene	ND	230	77	78	1.3	NC	NC	NC	30 - 130	30	
Dibenz(a,h)anthracene	ND	230	75	76	1.3	NC	NC	NC	30 - 130	30	
Fluoranthene	ND	230	76	73	4.0	NC	NC	NC	30 - 130	30	
Fluorene	ND	230	71	72	1.4	77	63	20.0	30 - 130	30	
Indeno(1,2,3-cd)pyrene	ND	230	74	75	1.3	NC	NC	NC	30 - 130	30	
Naphthalene	ND	230	63	63	0.0	81	63	25.0	30 - 130	30	
Phenanthrene	ND	230	73	71	2.8	NC	NC	NC	30 - 130	30	
Pyrene	ND	230	74	72	2.7	NC	NC	NC	30 - 130	30	
% 2-Fluorobiphenyl	64	%	64	65	1.6	74	61	19.3	30 - 130	30	
% Nitrobenzene-d5	67	%	69	68	1.5	75	49	41.9	30 - 130	30	r
% Terphenyl-d14	64	%	70	67	4.4	71	62	13.5	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%)

m = This parameter is outside laboratory MS/MSD specified recovery limits.
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
August 13, 2018

Monday, August 13, 2018

Criteria: CT: GBM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCB01074 - TIGHE-DAS

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

*** No Data to Display ***

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.

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

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

Project Location: ROCKVILLE MGP ***Project Number:***

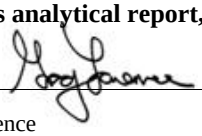
Laboratory Sample ID(s): CB01075 ***Sampling Date(s):*** 7/30/2018

List RCP Methods Used (e.g., 8260, 8270, et cetera) 8260, 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	***VPH and EPH methods only:*** **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?** **b) Were these reporting limits met?**	☑ Yes ☐ No ☑ 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 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:** Monday, August 13, 2018

Name of Laboratory Phoenix Environmental Labs, Inc.

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

CTDEP RCP Laboratory Analysis QA/QC Certification Form - November 2007
Laboratory Quality Assurance and Quality Control Guidance Reasonable Confidence Protocols

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

August 13, 2018

SDG I.D.: GCB01074

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.

ETPH Narration

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

Instrument:

AU-FID84 07/30/18-1 Jeff Bucko, Chemist 07/30/18

CB01075

The initial calibration (ETPH705I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 440912 (CB00372)

CB01075

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.

SVOA Narration

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

Instrument:

CHEM29 07/31/18-1 Harry Mullin, Chemist 07/31/18

CB01075

Initial Calibration Verification (CHEM29/BN_0726):
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 (CHEM29/0731_06-BN_0726):
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 441062 (CB01501)

CB01075

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

August 13, 2018

SDG I.D.: GCB01074

SVOA Narration

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%)

VOA Narration

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

Instrument:

CHEM31 07/30/18-2 Jane Li, Chemist 07/30/18

CB01075

Initial Calibration Verification (CHEM31/VT-L0730):
95% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 32% (20%), Methylene chloride 24% (20%), Trichlorofluoromethane 23% (20%)
The following compounds did not meet recommended response factors: Acetone 0.094 (0.1), Bromomethane 0.083 (0.1), Tetrachloroethene 0.151 (0.2)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM31/0730_14-VT-L0730):
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 441089 (CB00372)

CB01075

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Cooler: Yes [x] No [ ]
Coolant: IPK [ ] ICE [x] No [ ]

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

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

Temp 3.7°C Pg 1 of 1

Contact Options:
[ ] Fax:
[ ] Phone:
[x] Email: LEWilley@trowbond.com

Customer: Trowbe + Bond
Address: 213 Court St Suite 1100
Middle town CT

Project: Rockville MGP
Report to: Lynn Willey
Invoice to: Trowbe + Bond

Project P.O: 14-0755-4413

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 7/30/19

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

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	PAH	TCLP	VOC	Soil VOA Vials [X] methanol [ ] H2O	GL Soil container (4) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle
01074	SB-64 (24-30 ft)	S	7/30/19	10:50				3	1								
01075	SB-64 (38.5-40 ft)	S	7/30/19	11:00	X	X	X	3	1								

Relinquished by:	Accepted by:	Date:	Time:
REL	[signature]	7/30/19	1600

Comments, Special Requirements or Regulations:
DAS Prom Please hold SB-64 (24-30 ft)
Quote TI-025178A

Turnaround:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[x] Standard
[ ] Other
* SURCHARGE APPLIES

RI
[ ] Direct Exposure (Residential)
[ ] GW
[ ] Other

CT
[x] RCP Cert
[ ] GW Protection
[ ] SW Protection
[ ] GA Mobility
[x] GB Mobility
[x] Residential DEC
[x] I/C DEC
[ ] Other

MA
[ ] MCP Certification
[ ] GW-1
[ ] GW-2
[ ] GW-3
[ ] S-1
[ ] S-2
[ ] S-3
[ ] MWRA eSMART
[ ] Other

State where samples were collected: CT

Data Format
[x] Excel
[x] PDF
[ ] GIS/Key
[ ] EQuIS
[x] Other (emailed)

Data Package
[ ] Tier II Checklist
[ ] Full Data Package*
[x] Phoenix Std Report
[ ] Other

* SURCHARGE APPLIES

The Connecticut Light and Power Company
d/b/a Eversource Energy
Docket No. 26-05-10
Date Issued September 29, 2026
RSR-032 Attachment 17
Page 631 of 1282

PHOENIX
Environmental Laboratories, Inc.

Monday, August 27, 2018

Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Project ID: ROCKVILLE MGP
Sample ID#s: CB15818 - CB15820

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 have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

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

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

Analysis Report

August 27, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		08/20/18	11:15
Location Code:	TIGHE-DAS	Received by:	CP	08/21/18	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCB15818
Phoenix ID: CB15818

Project ID: ROCKVILLE MGP
Client ID: SB-62 (31-33FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	87		%		08/21/18	Q	SW846-%Solid
Soil Extraction SVOA PAH	Completed				08/21/18	JJ/CK	SW3545A
Extraction of CT ETPH	Completed				08/21/18	JJ/SCK	SW3545A
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	57	mg/Kg	1	08/22/18	JRB	CTETPH 8015D
Identification	ND		mg/Kg	1	08/22/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	85		%	1	08/22/18	JRB	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	4.4	ug/Kg	1	08/22/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,1-Dichloroethane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,1-Dichloroethene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,1-Dichloropropene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,2-Dibromoethane	ND	7.0	ug/Kg	1	08/22/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,2-Dichloroethane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,2-Dichloropropane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SB-62 (31-33FT)

Phoenix I.D.: CB15818

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,3-Dichloropropane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
2,2-Dichloropropane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
2-Chlorotoluene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
2-Hexanone	ND	36	ug/Kg	1	08/22/18	JLI	SW8260C
2-Isopropyltoluene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
4-Chlorotoluene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	36	ug/Kg	1	08/22/18	JLI	SW8260C
Acetone	ND	360	ug/Kg	1	08/22/18	JLI	SW8260C
Acrylonitrile	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Benzene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Bromobenzene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Bromochloromethane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Bromodichloromethane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Bromoform	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Bromomethane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Carbon Disulfide	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Carbon tetrachloride	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Chlorobenzene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Chloroethane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Chloroform	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Chloromethane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Dibromochloromethane	ND	4.4	ug/Kg	1	08/22/18	JLI	SW8260C
Dibromomethane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Dichlorodifluoromethane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Ethylbenzene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Hexachlorobutadiene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Isopropylbenzene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
m&p-Xylene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	44	ug/Kg	1	08/22/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	15	ug/Kg	1	08/22/18	JLI	SW8260C
Methylene chloride	ND	15	ug/Kg	1	08/22/18	JLI	SW8260C
Naphthalene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
n-Butylbenzene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
n-Propylbenzene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
o-Xylene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
p-Isopropyltoluene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
sec-Butylbenzene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Styrene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
tert-Butylbenzene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Tetrachloroethene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	15	ug/Kg	1	08/22/18	JLI	SW8260C
Toluene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Total Xylenes	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-62 (31-33FT)

Phoenix I.D.: CB15818

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,4-dichloro-2-butene	ND	15	ug/Kg	1	08/22/18	JLI	SW8260C
Trichloroethene	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Trichlorofluoromethane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
Vinyl chloride	ND	7.3	ug/Kg	1	08/22/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	94		%	1	08/22/18	JLI	70 - 130 %
% Bromofluorobenzene	96		%	1	08/22/18	JLI	70 - 130 %
% Dibromofluoromethane	107		%	1	08/22/18	JLI	70 - 130 %
% Toluene-d8	87		%	1	08/22/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Acenaphthene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Anthracene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Benz(a)anthracene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Chrysene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Fluoranthene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Fluorene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Naphthalene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Phenanthrene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Pyrene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	58		%	1	08/22/18	KCA	30 - 130 %
% Nitrobenzene-d5	60		%	1	08/22/18	KCA	30 - 130 %
% Terphenyl-d14	61		%	1	08/22/18	KCA	30 - 130 %
Field Extraction	Completed				08/20/18		SW5035A

Project ID: ROCKVILLE MGP
Client ID: SB-62 (31-33FT)

Phoenix I.D.: CB15818

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

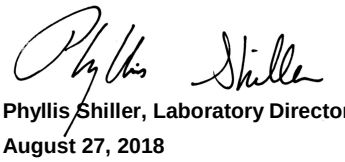
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

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

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
August 27, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

August 27, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		08/20/18	10:00
Location Code:	TIGHE-DAS	Received by:	CP	08/21/18	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCB15818
Phoenix ID: CB15819

Project ID: ROCKVILLE MGP
Client ID: SB-61 (23-25FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	91		%		08/21/18	Q	SW846-%Solid
Soil Extraction SVOA PAH	Completed				08/21/18	JJ/CK	SW3545A
Extraction of CT ETPH	Completed				08/21/18	JJ/SCK	SW3545A
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	910	110	mg/Kg	2	08/22/18	JRB	CTETPH 8015D
Identification	**		mg/Kg	2	08/22/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	116		%	2	08/22/18	JRB	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	200	ug/Kg	50	08/24/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	100	ug/Kg	50	08/24/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
1,1-Dichloroethane	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
1,1-Dichloroethene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
1,1-Dichloropropene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
1,2,4-Trimethylbenzene	3000	290	ug/Kg	50	08/24/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	58	ug/Kg	50	08/24/18	JLI	SW8260C
1,2-Dibromoethane	ND	29	ug/Kg	50	08/24/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
1,2-Dichloroethane	ND	200	ug/Kg	50	08/24/18	JLI	SW8260C
1,2-Dichloropropane	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
1,3,5-Trimethylbenzene	890	290	ug/Kg	50	08/24/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-61 (23-25FT)

Phoenix I.D.: CB15819

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
1,3-Dichloropropane	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
2,2-Dichloropropane	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
2-Chlorotoluene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
2-Hexanone	ND	1500	ug/Kg	50	08/24/18	JLI	SW8260C
2-Isopropyltoluene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
4-Chlorotoluene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	1500	ug/Kg	50	08/24/18	JLI	SW8260C
Acetone	ND	15000	ug/Kg	50	08/24/18	JLI	SW8260C
Acrylonitrile	ND	100	ug/Kg	50	08/24/18	JLI	SW8260C
Benzene	200	170	ug/Kg	50	08/24/18	JLI	SW8260C
Bromobenzene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Bromochloromethane	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Bromodichloromethane	ND	210	ug/Kg	50	08/24/18	JLI	SW8260C
Bromoform	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Bromomethane	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Carbon Disulfide	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Carbon tetrachloride	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Chlorobenzene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Chloroethane	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Chloroform	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Chloromethane	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	100	ug/Kg	50	08/24/18	JLI	SW8260C
Dibromochloromethane	ND	100	ug/Kg	50	08/24/18	JLI	SW8260C
Dibromomethane	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Dichlorodifluoromethane	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Ethylbenzene	1900	290	ug/Kg	50	08/24/18	JLI	SW8260C
Hexachlorobutadiene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Isopropylbenzene	610	290	ug/Kg	50	08/24/18	JLI	SW8260C
m&p-Xylene	960	290	ug/Kg	50	08/24/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	1700	ug/Kg	50	08/24/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	580	ug/Kg	50	08/24/18	JLI	SW8260C
Methylene chloride	ND	580	ug/Kg	50	08/24/18	JLI	SW8260C
Naphthalene	31000	2900	ug/Kg	500	08/25/18	JLI	SW8260C
n-Butylbenzene	220	170	ug/Kg	50	08/24/18	JLI	SW8260C
n-Propylbenzene	350	290	ug/Kg	50	08/24/18	JLI	SW8260C
o-Xylene	910	290	ug/Kg	50	08/24/18	JLI	SW8260C
p-Isopropyltoluene	320	290	ug/Kg	50	08/24/18	JLI	SW8260C
sec-Butylbenzene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Styrene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
tert-Butylbenzene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Tetrachloroethene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	580	ug/Kg	50	08/24/18	JLI	SW8260C
Toluene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Total Xylenes	1870	290	ug/Kg	50	08/24/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	100	ug/Kg	50	08/24/18	JLI	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SB-61 (23-25FT)

Phoenix I.D.: CB15819

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,4-dichloro-2-butene	ND	580	ug/Kg	50	08/24/18	JLI	SW8260C
Trichloroethene	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Trichlorofluoromethane	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	580	ug/Kg	50	08/24/18	JLI	SW8260C
Vinyl chloride	ND	290	ug/Kg	50	08/24/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	50	08/24/18	JLI	70 - 130 %
% Bromofluorobenzene	103		%	50	08/24/18	JLI	70 - 130 %
% Dibromofluoromethane	94		%	50	08/24/18	JLI	70 - 130 %
% Toluene-d8	103		%	50	08/24/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	10000	2500	ug/Kg	10	08/22/18	KCA	SW8270D
Acenaphthene	11000	2500	ug/Kg	10	08/22/18	KCA	SW8270D
Acenaphthylene	3300	250	ug/Kg	1	08/22/18	KCA	SW8270D
Anthracene	9200	2500	ug/Kg	10	08/22/18	KCA	SW8270D
Benz(a)anthracene	8000	1000	ug/Kg	10	08/22/18	KCA	SW8270D
Benzo(a)pyrene	6900	250	ug/Kg	1	08/22/18	KCA	SW8270D
Benzo(b)fluoranthene	3300	250	ug/Kg	1	08/22/18	KCA	SW8270D
Benzo(ghi)perylene	2400	250	ug/Kg	1	08/22/18	KCA	SW8270D
Benzo(k)fluoranthene	3800	250	ug/Kg	1	08/22/18	KCA	SW8270D
Chrysene	8000	1000	ug/Kg	10	08/22/18	KCA	SW8270D
Dibenz(a,h)anthracene	590	250	ug/Kg	1	08/22/18	KCA	SW8270D
Fluoranthene	19000	2500	ug/Kg	10	08/22/18	KCA	SW8270D
Fluorene	7100	2500	ug/Kg	10	08/22/18	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	2400	250	ug/Kg	1	08/22/18	KCA	SW8270D
Naphthalene	19000	2500	ug/Kg	10	08/22/18	KCA	SW8270D
Phenanthrene	22000	2500	ug/Kg	10	08/22/18	KCA	SW8270D
Pyrene	29000	2500	ug/Kg	10	08/22/18	KCA	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	63		%	1	08/22/18	KCA	30 - 130 %
% Nitrobenzene-d5	62		%	1	08/22/18	KCA	30 - 130 %
% Terphenyl-d14	62		%	1	08/22/18	KCA	30 - 130 %
Field Extraction	Completed				08/20/18		SW5035A

Project ID: ROCKVILLE MGP
Client ID: SB-61 (23-25FT)

Phoenix I.D.: CB15819

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

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:

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

Semi-Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

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

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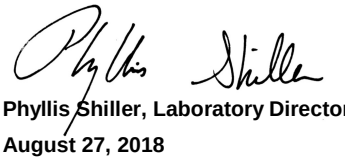

Phyllis Shiller, Laboratory Director
August 27, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

August 27, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		08/20/18	11:16
Location Code:	TIGHE-DAS	Received by:	CP	08/21/18	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCB15818
Phoenix ID: CB15820

Project ID: ROCKVILLE MGP
Client ID: DUP-101

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	86		%		08/21/18	Q	SW846-%Solid
Soil Extraction SVOA PAH	Completed				08/21/18	JJ/CK	SW3545A
Extraction of CT ETPH	Completed				08/21/18	JJ/SCK	SW3545A
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	57	mg/Kg	1	08/22/18	JRB	CTETPH 8015D
Identification	ND		mg/Kg	1	08/22/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	68		%	1	08/22/18	JRB	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.2	ug/Kg	1	08/22/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,1-Dichloroethane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,1-Dichloroethene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,1-Dichloropropene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,2-Dibromoethane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,2-Dichloroethane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,2-Dichloropropane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: DUP-101

Phoenix I.D.: CB15820

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,3-Dichloropropane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
2,2-Dichloropropane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
2-Chlorotoluene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
2-Hexanone	ND	27	ug/Kg	1	08/22/18	JLI	SW8260C
2-Isopropyltoluene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
4-Chlorotoluene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	27	ug/Kg	1	08/22/18	JLI	SW8260C
Acetone	ND	270	ug/Kg	1	08/22/18	JLI	SW8260C
Acrylonitrile	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Benzene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Bromobenzene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Bromochloromethane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Bromodichloromethane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Bromoform	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Bromomethane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Carbon Disulfide	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Carbon tetrachloride	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Chlorobenzene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Chloroethane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Chloroform	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Chloromethane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Dibromochloromethane	ND	3.2	ug/Kg	1	08/22/18	JLI	SW8260C
Dibromomethane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Dichlorodifluoromethane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Ethylbenzene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Hexachlorobutadiene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Isopropylbenzene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
m&p-Xylene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	32	ug/Kg	1	08/22/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	11	ug/Kg	1	08/22/18	JLI	SW8260C
Methylene chloride	ND	11	ug/Kg	1	08/22/18	JLI	SW8260C
Naphthalene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
n-Butylbenzene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
n-Propylbenzene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
o-Xylene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
p-Isopropyltoluene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
sec-Butylbenzene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Styrene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
tert-Butylbenzene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Tetrachloroethene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	11	ug/Kg	1	08/22/18	JLI	SW8260C
Toluene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Total Xylenes	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: DUP-101

Phoenix I.D.: CB15820

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,4-dichloro-2-butene	ND	11	ug/Kg	1	08/22/18	JLI	SW8260C
Trichloroethene	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Trichlorofluoromethane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
Vinyl chloride	ND	5.3	ug/Kg	1	08/22/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	96		%	1	08/22/18	JLI	70 - 130 %
% Bromofluorobenzene	97		%	1	08/22/18	JLI	70 - 130 %
% Dibromofluoromethane	100		%	1	08/22/18	JLI	70 - 130 %
% Toluene-d8	87		%	1	08/22/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Acenaphthene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Anthracene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Benz(a)anthracene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Chrysene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Fluoranthene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Fluorene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Naphthalene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Phenanthrene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
Pyrene	ND	260	ug/Kg	1	08/22/18	KCA	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	54		%	1	08/22/18	KCA	30 - 130 %
% Nitrobenzene-d5	46		%	1	08/22/18	KCA	30 - 130 %
% Terphenyl-d14	64		%	1	08/22/18	KCA	30 - 130 %
Field Extraction	Completed				08/20/18		SW5035A

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 there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
August 27, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Ver 1

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

QA/QC Report

August 27, 2018

QA/QC Data

SDG I.D.: GCB15818

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 444346 (ug/kg), QC Sample No: CB15457 (CB15818, CB15820)										
Volatiles - Soil										
1,1,1,2-Tetrachloroethane	ND	5.0	90	87	3.4	88	87	1.1	70 - 130	30
1,1,1-Trichloroethane	ND	5.0	101	98	3.0	96	98	2.1	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	3.0	94	73	25.1	88	86	2.3	70 - 130	30
1,1,2-Trichloroethane	ND	5.0	96	94	2.1	93	93	0.0	70 - 130	30
1,1-Dichloroethane	ND	5.0	98	100	2.0	99	105	5.9	70 - 130	30
1,1-Dichloroethene	ND	5.0	111	108	2.7	105	104	1.0	70 - 130	30
1,1-Dichloropropene	ND	5.0	97	96	1.0	93	93	0.0	70 - 130	30
1,2,3-Trichlorobenzene	ND	5.0	91	91	0.0	81	81	0.0	70 - 130	30
1,2,3-Trichloropropane	ND	5.0	88	86	2.3	86	88	2.3	70 - 130	30
1,2,4-Trichlorobenzene	ND	5.0	88	88	0.0	73	77	5.3	70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	89	88	1.1	85	83	2.4	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	5.0	93	98	5.2	94	100	6.2	70 - 130	30
1,2-Dibromoethane	ND	5.0	92	89	3.3	88	89	1.1	70 - 130	30
1,2-Dichlorobenzene	ND	5.0	97	95	2.1	91	91	0.0	70 - 130	30
1,2-Dichloroethane	ND	5.0	101	98	3.0	99	99	0.0	70 - 130	30
1,2-Dichloropropane	ND	5.0	100	96	4.1	95	97	2.1	70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	86	86	0.0	83	82	1.2	70 - 130	30
1,3-Dichlorobenzene	ND	5.0	90	88	2.2	84	84	0.0	70 - 130	30
1,3-Dichloropropane	ND	5.0	89	88	1.1	86	87	1.2	70 - 130	30
1,4-Dichlorobenzene	ND	5.0	94	92	2.2	86	86	0.0	70 - 130	30
2,2-Dichloropropane	ND	5.0	101	93	8.2	94	97	3.1	70 - 130	30
2-Chlorotoluene	ND	5.0	89	86	3.4	88	87	1.1	70 - 130	30
2-Hexanone	ND	25	84	80	4.9	82	85	3.6	70 - 130	30
2-Isopropyltoluene	ND	5.0	96	94	2.1	92	92	0.0	70 - 130	30
4-Chlorotoluene	ND	5.0	88	83	5.8	82	82	0.0	70 - 130	30
4-Methyl-2-pentanone	ND	25	97	97	0.0	96	98	2.1	70 - 130	30
Acetone	ND	10	77	77	0.0	73	81	10.4	70 - 130	30
Acrylonitrile	ND	5.0	95	101	6.1	91	101	10.4	70 - 130	30
Benzene	ND	1.0	98	96	2.1	94	95	1.1	70 - 130	30
Bromobenzene	ND	5.0	95	93	2.1	93	91	2.2	70 - 130	30
Bromochloromethane	ND	5.0	95	89	6.5	89	95	6.5	70 - 130	30
Bromodichloromethane	ND	5.0	99	96	3.1	94	97	3.1	70 - 130	30
Bromoform	ND	5.0	81	80	1.2	81	82	1.2	70 - 130	30
Bromomethane	ND	5.0	108	101	6.7	103	105	1.9	70 - 130	30
Carbon Disulfide	ND	5.0	106	106	0.0	101	104	2.9	70 - 130	30
Carbon tetrachloride	ND	5.0	94	94	0.0	92	96	4.3	70 - 130	30
Chlorobenzene	ND	5.0	94	91	3.2	88	88	0.0	70 - 130	30
Chloroethane	ND	5.0	110	105	4.7	109	109	0.0	70 - 130	30
Chloroform	ND	5.0	95	90	5.4	90	94	4.3	70 - 130	30
Chloromethane	ND	5.0	99	96	3.1	96	99	3.1	70 - 130	30
cis-1,2-Dichloroethene	ND	5.0	102	96	6.1	96	103	7.0	70 - 130	30

QA/QC Data

SDG I.D.: GCB15818

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
cis-1,3-Dichloropropene	ND	5.0	102	98	4.0	96	96	0.0	70 - 130	30
Dibromochloromethane	ND	3.0	96	94	2.1	93	94	1.1	70 - 130	30
Dibromomethane	ND	5.0	103	99	4.0	98	98	0.0	70 - 130	30
Dichlorodifluoromethane	ND	5.0	109	103	5.7	105	108	2.8	70 - 130	30
Ethylbenzene	ND	1.0	92	87	5.6	85	86	1.2	70 - 130	30
Hexachlorobutadiene	ND	5.0	91	88	3.4	82	84	2.4	70 - 130	30
Isopropylbenzene	ND	1.0	89	90	1.1	88	88	0.0	70 - 130	30
m&p-Xylene	ND	2.0	87	84	3.5	81	81	0.0	70 - 130	30
Methyl ethyl ketone	ND	5.0	93	87	6.7	87	93	6.7	70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	110	109	0.9	106	110	3.7	70 - 130	30
Methylene chloride	ND	5.0	95	94	1.1	90	93	3.3	70 - 130	30
Naphthalene	ND	5.0	94	95	1.1	90	93	3.3	70 - 130	30
n-Butylbenzene	ND	1.0	90	89	1.1	82	82	0.0	70 - 130	30
n-Propylbenzene	ND	1.0	89	90	1.1	86	84	2.4	70 - 130	30
o-Xylene	ND	2.0	91	89	2.2	87	88	1.1	70 - 130	30
p-Isopropyltoluene	ND	1.0	89	89	0.0	85	84	1.2	70 - 130	30
sec-Butylbenzene	ND	1.0	94	93	1.1	91	90	1.1	70 - 130	30
Styrene	ND	5.0	86	84	2.4	81	83	2.4	70 - 130	30
tert-Butylbenzene	ND	1.0	92	90	2.2	91	89	2.2	70 - 130	30
Tetrachloroethene	ND	5.0	97	97	0.0	93	94	1.1	70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	99	98	1.0	96	104	8.0	70 - 130	30
Toluene	ND	1.0	100	96	4.1	96	97	1.0	70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	108	107	0.9	102	106	3.8	70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	92	91	1.1	87	88	1.1	70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	92	92	0.0	86	87	1.2	70 - 130	30
Trichloroethene	ND	5.0	99	98	1.0	98	101	3.0	70 - 130	30
Trichlorofluoromethane	ND	5.0	102	102	0.0	98	101	3.0	70 - 130	30
Trichlorotrifluoroethane	ND	5.0	107	108	0.9	105	108	2.8	70 - 130	30
Vinyl chloride	ND	5.0	107	106	0.9	105	106	0.9	70 - 130	30
% 1,2-dichlorobenzene-d4	96	%	101	101	0.0	100	100	0.0	70 - 130	30
% Bromofluorobenzene	96	%	96	94	2.1	95	94	1.1	70 - 130	30
% Dibromofluoromethane	107	%	101	96	5.1	99	101	2.0	70 - 130	30
% Toluene-d8	85	%	106	105	0.9	104	106	1.9	70 - 130	30

Comment:

A blank MS/MSD was analyzed with this batch.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 444180 (ug/kg), QC Sample No: CB15484 (CB15818, CB15819, CB15820)

Semivolatiles - Soil

2-Methylnaphthalene	ND	230	66	63	4.7	42	53	23.2	30 - 130	30
Acenaphthene	ND	230	76	75	1.3	51	58	12.8	30 - 130	30
Acenaphthylene	ND	130	71	70	1.4	48	55	13.6	30 - 130	30
Anthracene	ND	230	75	74	1.3	67	57	16.1	30 - 130	30
Benz(a)anthracene	ND	230	76	73	4.0	72	57	23.3	30 - 130	30
Benzo(a)pyrene	ND	130	73	71	2.8	69	55	22.6	30 - 130	30
Benzo(b)fluoranthene	ND	160	76	76	0.0	73	57	24.6	30 - 130	30
Benzo(ghi)perylene	ND	230	74	73	1.4	70	55	24.0	30 - 130	30
Benzo(k)fluoranthene	ND	230	76	73	4.0	73	57	24.6	30 - 130	30
Chrysene	ND	230	77	74	4.0	72	57	23.3	30 - 130	30
Dibenz(a,h)anthracene	ND	130	76	77	1.3	72	56	25.0	30 - 130	30
Fluoranthene	ND	230	75	74	1.3	73	57	24.6	30 - 130	30
Fluorene	ND	230	77	75	2.6	58	59	1.7	30 - 130	30
Indeno(1,2,3-cd)pyrene	ND	230	76	74	2.7	72	55	26.8	30 - 130	30

QA/QC Data

SDG I.D.: GCB15818

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Naphthalene	ND	230	64	64	0.0	41	53	25.5	30 - 130	30	
Phenanthrene	ND	130	75	74	1.3	68	57	17.6	30 - 130	30	
Pyrene	ND	230	76	74	2.7	74	59	22.6	30 - 130	30	
% 2-Fluorobiphenyl	60	%	64	64	0.0	41	50	19.8	30 - 130	30	
% Nitrobenzene-d5	61	%	65	63	3.1	37	52	33.7	30 - 130	30	r
% Terphenyl-d14	56	%	65	62	4.7	61	49	21.8	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%)

QA/QC Batch 444065 (mg/Kg), QC Sample No: CB15859 (CB15818, CB15819, CB15820)

TPH by GC (Extractable Products) - Soil

Ext. Petroleum H.C. (C9-C36)	ND	50	66	59	11.2	76	73	4.0	60 - 120	30	l
% n-Pentacosane	73	%	79	72	9.3	84	81	3.6	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 444794 (ug/kg), QC Sample No: CB17065 (CB15819 (50X))

Volatiles - Soil

1,1,1,2-Tetrachloroethane	ND	5.0	109	112	2.7	105	103	1.9	70 - 130	30	
1,1,1-Trichloroethane	ND	5.0	106	108	1.9	101	102	1.0	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	3.0	98	101	3.0	95	90	5.4	70 - 130	30	
1,1,2-Trichloroethane	ND	5.0	98	103	5.0	96	93	3.2	70 - 130	30	
1,1-Dichloroethane	ND	5.0	99	100	1.0	91	94	3.2	70 - 130	30	
1,1-Dichloroethene	ND	5.0	99	101	2.0	90	93	3.3	70 - 130	30	
1,1-Dichloropropene	ND	5.0	112	115	2.6	105	106	0.9	70 - 130	30	
1,2,3-Trichlorobenzene	ND	5.0	107	112	4.6	72	121	50.8	70 - 130	30	r
1,2,3-Trichloropropane	ND	5.0	96	103	7.0	92	86	6.7	70 - 130	30	
1,2,4-Trichlorobenzene	ND	5.0	107	113	5.5	74	122	49.0	70 - 130	30	r
1,2,4-Trimethylbenzene	ND	1.0	107	109	1.9	94	87	7.7	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	105	111	5.6	99	91	8.4	70 - 130	30	
1,2-Dibromoethane	ND	5.0	101	107	5.8	100	97	3.0	70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	99	102	3.0	85	77	9.9	70 - 130	30	
1,2-Dichloroethane	ND	5.0	104	108	3.8	105	104	1.0	70 - 130	30	
1,2-Dichloropropane	ND	5.0	104	106	1.9	101	100	1.0	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	109	112	2.7	98	92	6.3	70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	104	106	1.9	88	79	10.8	70 - 130	30	
1,3-Dichloropropane	ND	5.0	100	106	5.8	100	97	3.0	70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	100	103	3.0	85	77	9.9	70 - 130	30	
2,2-Dichloropropane	ND	5.0	118	106	10.7	93	105	12.1	70 - 130	30	
2-Chlorotoluene	ND	5.0	107	108	0.9	96	91	5.3	70 - 130	30	
2-Hexanone	ND	25	86	93	7.8	70	104	39.1	70 - 130	30	r
2-Isopropyltoluene	ND	5.0	111	113	1.8	98	91	7.4	70 - 130	30	
4-Chlorotoluene	ND	5.0	105	106	0.9	92	87	5.6	70 - 130	30	
4-Methyl-2-pentanone	ND	25	88	96	8.7	83	79	4.9	70 - 130	30	
Acetone	ND	10	68	71	4.3	60	60	0.0	70 - 130	30	l,m
Acrylonitrile	ND	5.0	88	92	4.4	67	65	3.0	70 - 130	30	m
Benzene	ND	1.0	103	106	2.9	98	98	0.0	70 - 130	30	
Bromobenzene	ND	5.0	103	106	2.9	94	88	6.6	70 - 130	30	
Bromochloromethane	ND	5.0	101	104	2.9	99	98	1.0	70 - 130	30	
Bromodichloromethane	ND	5.0	104	107	2.8	101	102	1.0	70 - 130	30	
Bromoform	ND	5.0	111	117	5.3	105	98	6.9	70 - 130	30	
Bromomethane	ND	5.0	80	82	2.5	75	74	1.3	70 - 130	30	

QA/QC Data

SDG I.D.: GCB15818

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Carbon Disulfide	ND	5.0	107	109	1.9	94	98	4.2	70 - 130	30	
Carbon tetrachloride	ND	5.0	104	108	3.8	99	103	4.0	70 - 130	30	
Chlorobenzene	ND	5.0	102	104	1.9	95	91	4.3	70 - 130	30	
Chloroethane	ND	5.0	91	93	2.2	83	88	5.8	70 - 130	30	
Chloroform	ND	5.0	99	102	3.0	95	97	2.1	70 - 130	30	
Chloromethane	ND	5.0	84	89	5.8	76	79	3.9	70 - 130	30	
cis-1,2-Dichloroethene	ND	5.0	96	107	10.8	97	91	6.4	70 - 130	30	
cis-1,3-Dichloropropene	ND	5.0	105	111	5.6	101	96	5.1	70 - 130	30	
Dibromochloromethane	ND	3.0	112	116	3.5	109	105	3.7	70 - 130	30	
Dibromomethane	ND	5.0	98	103	5.0	97	94	3.1	70 - 130	30	
Dichlorodifluoromethane	ND	5.0	87	89	2.3	79	81	2.5	70 - 130	30	
Ethylbenzene	ND	1.0	105	107	1.9	96	93	3.2	70 - 130	30	
Hexachlorobutadiene	ND	5.0	118	123	4.1	83	130	44.1	70 - 130	30	r
Isopropylbenzene	ND	1.0	116	120	3.4	105	104	1.0	70 - 130	30	
m&p-Xylene	ND	2.0	109	111	1.8	98	95	3.1	70 - 130	30	
Methyl ethyl ketone	ND	5.0	77	86	11.0	69	66	4.4	70 - 130	30	m
Methyl t-butyl ether (MTBE)	ND	1.0	106	112	5.5	104	104	0.0	70 - 130	30	
Methylene chloride	ND	5.0	88	89	1.1	86	88	2.3	70 - 130	30	
n-Butylbenzene	ND	1.0	110	113	2.7	89	81	9.4	70 - 130	30	
n-Propylbenzene	ND	1.0	110	111	0.9	97	94	3.1	70 - 130	30	
o-Xylene	ND	2.0	114	118	3.4	104	101	2.9	70 - 130	30	
p-Isopropyltoluene	ND	1.0	115	118	2.6	98	92	6.3	70 - 130	30	
sec-Butylbenzene	ND	1.0	117	120	2.5	102	96	6.1	70 - 130	30	
Styrene	ND	5.0	113	115	1.8	98	94	4.2	70 - 130	30	
tert-Butylbenzene	ND	1.0	114	118	3.4	103	98	5.0	70 - 130	30	
Tetrachloroethene	ND	5.0	113	114	0.9	105	105	0.0	70 - 130	30	
Tetrahydrofuran (THF)	ND	5.0	96	103	7.0	94	91	3.2	70 - 130	30	
Toluene	ND	1.0	102	105	2.9	90	90	0.0	70 - 130	30	
trans-1,2-Dichloroethene	ND	5.0	98	101	3.0	89	93	4.4	70 - 130	30	
trans-1,3-Dichloropropene	ND	5.0	101	105	3.9	95	91	4.3	70 - 130	30	
trans-1,4-dichloro-2-butene	ND	5.0	103	109	5.7	88	81	8.3	70 - 130	30	
Trichloroethene	ND	5.0	109	112	2.7	103	101	2.0	70 - 130	30	
Trichlorofluoromethane	ND	5.0	92	93	1.1	82	86	4.8	70 - 130	30	
Trichlorotrifluoroethane	ND	5.0	104	103	1.0	91	96	5.3	70 - 130	30	
Vinyl chloride	ND	5.0	93	94	1.1	82	87	5.9	70 - 130	30	
% 1,2-dichlorobenzene-d4	100	%	100	99	1.0	99	99	0.0	70 - 130	30	
% Bromofluorobenzene	96	%	102	100	2.0	101	102	1.0	70 - 130	30	
% Dibromofluoromethane	103	%	102	102	0.0	103	103	0.0	70 - 130	30	
% Toluene-d8	101	%	99	99	0.0	99	99	0.0	70 - 130	30	

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 444938 (ug/kg), QC Sample No: CB18738 (CB15819 (500X))

Volatiles - Soil

Naphthalene	ND	5.0	113	115	1.8	103	110	6.6	70 - 130	30	

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

QA/QC Data

SDG I.D.: GCB15818

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD 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
August 27, 2018

Monday, August 27, 2018

Criteria: CT: GBM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCB15818 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CB15819	$8100SMR	Benz(a)anthracene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	8000	1000	7800	7800	ug/Kg
CB15819	$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	6900	250	1000	1000	ug/Kg
CB15819	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	2400	250	1000	1000	ug/Kg
CB15819	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	3300	250	1000	1000	ug/Kg
CB15819	$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	8000	1000	1000	1000	ug/Kg
CB15819	$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	6900	250	1000	1000	ug/Kg
CB15819	$8100SMR	2-Methylnaphthalene	CT / RSR GB (mg/kg) / APS Organics	10000	2500	5600	5600	ug/Kg
CB15819	$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	2400	250	1000	1000	ug/Kg
CB15819	$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	8000	1000	1000	1000	ug/Kg
CB15819	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	2400	250	1000	1000	ug/Kg
CB15819	$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	3800	250	1000	1000	ug/Kg
CB15819	$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	6900	250	1000	1000	ug/Kg
CB15819	$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	8000	1000	1000	1000	ug/Kg
CB15819	$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	3300	250	1000	1000	ug/Kg
CB15819	$8260MAR	1,2-Dibromoethane	CT / RSR DEC RES (mg/kg) / Volatiles	ND	29	7	7	ug/Kg
CB15819	$8260MAR	1,2-Dibromo-3-chloropropane	CT / RSR GB (mg/kg) / APS Organics	ND	58	40	40	ug/Kg
CB15819	$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR DEC RES (mg/kg) / Pest/PCB/TPH	910	110	500	500	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 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.

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

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

Project Location: ROCKVILLE MGP ***Project Number:***

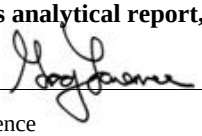
Laboratory Sample ID(s): CB15818-CB15820 ***Sampling Date(s):*** 8/20/2018

List RCP Methods Used (e.g., 8260, 8270, et cetera) 8260, 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	***VPH and EPH methods only:*** **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 Reasonable Confidence Protocol documents acheived? See Sections: ETPH Narration, VOA Narration.**	☐ Yes ☑ No
5	**a) Were reporting limits specified or referenced on the chain-of-custody?** **b) Were these reporting limits met?**	☑ Yes ☐ No ☐ 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 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:** Monday, August 27, 2018

Name of Laboratory Phoenix Environmental Labs, Inc.

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

CTDEP RCP Laboratory Analysis QA/QC Certification Form - November 2007
Laboratory Quality Assurance and Quality Control Guidance Reasonable Confidence Protocols

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

August 27, 2018

SDG I.D.: GCB15818

SDG Comments

8270 Semi-volatile Organics: CB15818, CB15819, CB15820
The client requested a short list for 8270 RCP Semivolatile. Only the PAH constituents are reported as requested on the chain-of-custody.

Volatile 8260 analysis:
1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane do not meet the GWP these compounds are analyzed by GC/ECD to achieve this criteria.

ETPH Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? No.

QC Batch 444065 (Samples: CB15818, CB15819, CB15820): -----

The LCSD recovery is below the method criteria. The surrogate recovery is acceptable. The Batch MS/MSD recoveries are acceptable. No significant bias is suspected.

Instrument:

AU-FID11 08/21/18-1 Jeff Bucko, Chemist 08/21/18

CB15818

The initial calibration (ETPH728I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-FID22 08/22/18-1 Jeff Bucko, Chemist 08/22/18

CB15819

The initial calibration (ETPH802I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-XL2 08/21/18-1 Jeff Bucko, Chemist 08/21/18

CB15820

The initial calibration (ETPH814I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 444065 (CB15859)

CB15818, CB15819, CB15820

All LCS recoveries were within 60 - 120 with the following exceptions: None.
All LCSD recoveries were within 60 - 120 with the following exceptions: Ext. Petroleum H.C. (C9-C36)(59%)
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.

SVOA Narration

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

Instrument:

CHEM06 08/21/18-2 Matt Richard, Chemist 08/21/18

CB15818, CB15819

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RCP Certification Report

August 27, 2018

SDG I.D.: GCB15818

SVOA Narration

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 Verification (CHEM06/SPLIT_0816):
95% 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 (CHEM06/0821_29-SPLIT_0816):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% 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.

CHEM19 08/22/18-1 Harry Mullin, Chemist 08/22/18

CB15819, CB15820

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 Verification (CHEM19/SPLIT_0816):
95% 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 (CHEM19/0822_02-SPLIT_0816):
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 444180 (CB15484)

CB15818, CB15819, CB15820

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%)

VOA Narration

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RCP Certification Report

August 27, 2018

SDG I.D.: GCB15818

VOA Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? No.

QC Batch 444794 (Samples: CB15819): -----

The LCS and Batch MS/MSD recovery is below the lower range but within the method criteria. A slight low bias is possible. (Acetone)

Instrument:

CHEM14 08/24/18-2 Jane Li, Chemist 08/24/18

CB15819

Initial Calibration Verification (CHEM14/vt-0823):
94% 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 (CHEM14/0824_36-vt-0823):
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.

CHEM18 08/21/18-2 Jane Li, Chemist 08/21/18

CB15818, CB15820

Initial Calibration Verification (CHEM18/VT-M0817):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trichlorobenzene 21% (20%), Acetone 34% (20%), Methyl Ethyl Ketone 23% (20%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM18/0821M30-VT-M0817):
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.

CHEM31 08/23/18-2 Jane Li, Chemist 08/23/18

CB15819

Initial Calibration Verification (CHEM31/VT-L0822):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: Acetone 25% (20%), Chloroethane 30% (20%), Styrene 22% (20%)
The following compounds did not meet recommended response factors: Bromoform 0.083 (0.1), Tetrachloroethene 0.122 (0.2), Trichloroethene 0.197 (0.2)
The following compounds did not meet a minimum response factors: None.

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RCP Certification Report

August 27, 2018

SDG I.D.: GCB15818

VOA Narration

Continuing Calibration Verification (CHEM31/0823_31-VT-L0822):
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: Bromoform 0.093 (0.1)
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 444346 (CB15457)

CB15818, CB15820

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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.
A blank MS/MSD was analyzed with this batch.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Batch 444794 (CB17065)

CB15819

All LCS recoveries were within 70 - 130 with the following exceptions: Acetone(68%)
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 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Batch 444938 (CB18738)

CB15819

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Temperature Narration

The samples were received at 1.8C with cooling initiated.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler: Yes [X] No [ ]
Coolant: IPK [ ] ICE [X] No [ ]

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

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

Temp 1.8 °C Pg 1 of 1

Contact Options:
[ ] Fax:
[ ] Phone:
[X] Email: LWilley@tighebond.com

Customer: Tighe + Bond
Address: 213 Court St
Middletown CT

Project: Rockville MGP
Report to: Lynn Willey
Invoice to: Tighe + Bond

Project P.O:

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 8/21/19

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

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOC	PAH	ETPH	Soil VOA Vials [X] methanol [X] H2O	GL Soil container (4) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle
15818	SB-62 (31-33 FT)	S	8/20/19	11:15	X	X	X		3	1							
15819	SB-61 (23-25 FT)		8/21/19	1000	X	X	X		3	1							
15820	DUP-101		8/20/19	11:16	X	X	X		3	1							

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature] Bruce	8/21/19	16:30

Comments, Special Requirements or Regulations:
DAS Pricing
quote: TI0125178A

Turnaround:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[X] Standard
[ ] Other
* SURCHARGE APPLIES

RI
[ ] Direct Exposure (Residential)
[ ] GW
[ ] Other

CT
[X] RCP Cert
[ ] GW Protection
[ ] SW Protection
[ ] GA Mobility
[X] GB Mobility
[X] Residential DEC
[X] I/C DEC
[ ] Other

MA
[ ] MCP Certification
[ ] GW-1
[ ] GW-2
[ ] GW-3
[ ] S-1
[ ] S-2
[ ] S-3
[ ] MWRA eSMART
[ ] Other

State where samples were collected: CT

Data Format
[X] Excel
[X] PDF
[ ] GIS/Key
[ ] EQuIS
[X] Other Equis

Data Package
[ ] Tier II Checklist
[ ] Full Data Package*
[X] Phoenix Std Report
[ ] Other

* SURCHARGE APPLIES

The Connecticut Light and Power Company
d/b/a Eversource Energy
Docket No. 26-05-10
Date Issued September 29, 2026
RSR-032 Attachment 17
Page 655 of 1282

PHOENIX
Environmental Laboratories, Inc.

Monday, August 27, 2018

Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Project ID: ROCKVILLE MGP
Sample ID#s: CB17429

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 have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

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

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

Analysis Report

August 27, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		08/23/18	11:35
Location Code:	TIGHE-DAS	Received by:	SW	08/23/18	15:21
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	E-0755-44B				

Laboratory Data

SDG ID: GCB17425
Phoenix ID: CB17429

Project ID: ROCKVILLE MGP
Client ID: SB-60 (40-42 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	79		%		08/24/18	Q	SW846-%Solid
Soil Extraction SVOA PAH	Completed				08/23/18	JJ/CK	SW3545A
Extraction of CT ETPH	Completed				08/23/18	AA/TCK	SW3545A
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	62	mg/Kg	1	08/24/18	AW	CTETPH 8015D
Identification	ND		mg/Kg	1	08/24/18	AW	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	71		%	1	08/24/18	AW	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,1-Dichloroethane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,1-Dichloroethene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,1-Dichloropropene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,2-Dibromoethane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,2-Dichloroethane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,2-Dichloropropane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SB-60 (40-42 FT)

Phoenix I.D.: CB17429

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,3-Dichloropropane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
2,2-Dichloropropane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
2-Chlorotoluene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
2-Hexanone	ND	25	ug/Kg	1	08/24/18	JLI	SW8260C
2-Isopropyltoluene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
4-Chlorotoluene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	25	ug/Kg	1	08/24/18	JLI	SW8260C
Acetone	ND	250	ug/Kg	1	08/24/18	JLI	SW8260C
Acrylonitrile	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Benzene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Bromobenzene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Bromochloromethane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Bromodichloromethane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Bromoform	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Bromomethane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Carbon Disulfide	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Carbon tetrachloride	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Chlorobenzene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Chloroethane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Chloroform	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Chloromethane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Dibromochloromethane	ND	3.0	ug/Kg	1	08/24/18	JLI	SW8260C
Dibromomethane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Ethylbenzene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Hexachlorobutadiene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Isopropylbenzene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
m&p-Xylene	6.4	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	30	ug/Kg	1	08/24/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/Kg	1	08/24/18	JLI	SW8260C
Methylene chloride	ND	10	ug/Kg	1	08/24/18	JLI	SW8260C
Naphthalene	160	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
n-Butylbenzene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
n-Propylbenzene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
o-Xylene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
p-Isopropyltoluene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
sec-Butylbenzene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Styrene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
tert-Butylbenzene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Tetrachloroethene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	10	ug/Kg	1	08/24/18	JLI	SW8260C
Toluene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Total Xylenes	6.4	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SB-60 (40-42 FT)

Phoenix I.D.: CB17429

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,4-dichloro-2-butene	ND	10	ug/Kg	1	08/24/18	JLI	SW8260C
Trichloroethene	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Trichlorofluoromethane	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	10	ug/Kg	1	08/24/18	JLI	SW8260C
Vinyl chloride	ND	5.0	ug/Kg	1	08/24/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	08/24/18	JLI	70 - 130 %
% Bromofluorobenzene	103		%	1	08/24/18	JLI	70 - 130 %
% Dibromofluoromethane	94		%	1	08/24/18	JLI	70 - 130 %
% Toluene-d8	103		%	1	08/24/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	ND	290	ug/Kg	1	08/24/18	KCA	SW8270D
Acenaphthene	ND	290	ug/Kg	1	08/24/18	KCA	SW8270D
Acenaphthylene	ND	290	ug/Kg	1	08/24/18	KCA	SW8270D
Anthracene	ND	290	ug/Kg	1	08/24/18	KCA	SW8270D
Benz(a)anthracene	ND	290	ug/Kg	1	08/24/18	KCA	SW8270D
Benzo(a)pyrene	ND	290	ug/Kg	1	08/24/18	KCA	SW8270D
Benzo(b)fluoranthene	ND	290	ug/Kg	1	08/24/18	KCA	SW8270D
Benzo(ghi)perylene	ND	290	ug/Kg	1	08/24/18	KCA	SW8270D
Benzo(k)fluoranthene	ND	290	ug/Kg	1	08/24/18	KCA	SW8270D
Chrysene	ND	290	ug/Kg	1	08/24/18	KCA	SW8270D
Dibenz(a,h)anthracene	ND	290	ug/Kg	1	08/24/18	KCA	SW8270D
Fluoranthene	ND	290	ug/Kg	1	08/24/18	KCA	SW8270D
Fluorene	ND	290	ug/Kg	1	08/24/18	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	ND	290	ug/Kg	1	08/24/18	KCA	SW8270D
Naphthalene	ND	290	ug/Kg	1	08/24/18	KCA	SW8270D
Phenanthrene	ND	290	ug/Kg	1	08/24/18	KCA	SW8270D
Pyrene	ND	290	ug/Kg	1	08/24/18	KCA	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	59		%	1	08/24/18	KCA	30 - 130 %
% Nitrobenzene-d5	58		%	1	08/24/18	KCA	30 - 130 %
% Terphenyl-d14	62		%	1	08/24/18	KCA	30 - 130 %
Field Extraction	Completed				08/23/18		SW5035A

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 there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
August 27, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Ver 1

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

August 27, 2018

QA/QC Data

SDG I.D.: GCB17425

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 444516 (mg/Kg), QC Sample No: CB17295 (CB17429)											
TPH by GC (Extractable Products) - Soil											
Ext. Petroleum H.C. (C9-C36)	ND	50	60	82	31.0	83	72	14.2	60 - 120	30	r
% n-Pentacosane	80	%	76	89	15.8	86	71	19.1	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 444939 (ug/kg), QC Sample No: CB17429 (CB17429)											
Volatiles - Soil											
1,1,1,2-Tetrachloroethane	ND	5.0	97	98	1.0	92	98	6.3	70 - 130	30	
1,1,1-Trichloroethane	ND	5.0	97	97	0.0	90	94	4.3	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	3.0	98	100	2.0	91	100	9.4	70 - 130	30	
1,1,2-Trichloroethane	ND	5.0	92	93	1.1	89	96	7.6	70 - 130	30	
1,1-Dichloroethane	ND	5.0	97	98	1.0	89	93	4.4	70 - 130	30	
1,1-Dichloroethene	ND	5.0	91	93	2.2	79	84	6.1	70 - 130	30	
1,1-Dichloropropene	ND	5.0	96	98	2.1	93	97	4.2	70 - 130	30	
1,2,3-Trichlorobenzene	ND	5.0	93	94	1.1	85	96	12.2	70 - 130	30	
1,2,3-Trichloropropane	ND	5.0	93	95	2.1	89	97	8.6	70 - 130	30	
1,2,4-Trichlorobenzene	ND	5.0	94	97	3.1	93	103	10.2	70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	97	100	3.0	95	100	5.1	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	95	97	2.1	84	96	13.3	70 - 130	30	
1,2-Dibromoethane	ND	5.0	96	97	1.0	91	98	7.4	70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	94	95	1.1	91	98	7.4	70 - 130	30	
1,2-Dichloroethane	ND	5.0	96	96	0.0	89	95	6.5	70 - 130	30	
1,2-Dichloropropane	ND	5.0	95	96	1.0	91	96	5.3	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	98	99	1.0	94	99	5.2	70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	95	97	2.1	93	100	7.3	70 - 130	30	
1,3-Dichloropropane	ND	5.0	95	96	1.0	90	95	5.4	70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	94	95	1.1	92	98	6.3	70 - 130	30	
2,2-Dichloropropane	ND	5.0	102	103	1.0	97	104	7.0	70 - 130	30	
2-Chlorotoluene	ND	5.0	95	98	3.1	93	99	6.3	70 - 130	30	
2-Hexanone	ND	25	93	95	2.1	84	94	11.2	70 - 130	30	
2-Isopropyltoluene	ND	5.0	105	106	0.9	101	107	5.8	70 - 130	30	
4-Chlorotoluene	ND	5.0	95	97	2.1	93	99	6.3	70 - 130	30	
4-Methyl-2-pentanone	ND	25	98	100	2.0	92	101	9.3	70 - 130	30	
Acetone	ND	10	90	94	4.3	86	88	2.3	70 - 130	30	
Acrylonitrile	ND	5.0	102	104	1.9	94	104	10.1	70 - 130	30	
Benzene	ND	1.0	94	95	1.1	90	95	5.4	70 - 130	30	
Bromobenzene	ND	5.0	93	95	2.1	90	96	6.5	70 - 130	30	
Bromochloromethane	ND	5.0	94	95	1.1	89	94	5.5	70 - 130	30	
Bromodichloromethane	ND	5.0	99	100	1.0	92	97	5.3	70 - 130	30	
Bromoform	ND	5.0	100	103	3.0	89	100	11.6	70 - 130	30	
Bromomethane	ND	5.0	89	90	1.1	102	101	1.0	70 - 130	30	

QA/QC Data

SDG I.D.: GCB17425

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Carbon Disulfide	ND	5.0	107	111	3.7	85	92	7.9	70 - 130	30
Carbon tetrachloride	ND	5.0	96	97	1.0	87	92	5.6	70 - 130	30
Chlorobenzene	ND	5.0	93	95	2.1	91	97	6.4	70 - 130	30
Chloroethane	ND	5.0	80	85	6.1	94	95	1.1	70 - 130	30
Chloroform	ND	5.0	96	96	0.0	89	93	4.4	70 - 130	30
Chloromethane	ND	5.0	84	84	0.0	78	81	3.8	70 - 130	30
cis-1,2-Dichloroethene	ND	5.0	96	96	0.0	90	96	6.5	70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	97	98	1.0	93	98	5.2	70 - 130	30
Dibromochloromethane	ND	3.0	104	106	1.9	95	103	8.1	70 - 130	30
Dibromomethane	ND	5.0	94	94	0.0	89	95	6.5	70 - 130	30
Dichlorodifluoromethane	ND	5.0	82	86	4.8	75	79	5.2	70 - 130	30
Ethylbenzene	ND	1.0	95	96	1.0	92	98	6.3	70 - 130	30
Hexachlorobutadiene	ND	5.0	92	96	4.3	95	103	8.1	70 - 130	30
Isopropylbenzene	ND	1.0	98	100	2.0	94	99	5.2	70 - 130	30
m&p-Xylene	ND	2.0	96	99	3.1	95	101	6.1	70 - 130	30
Methyl ethyl ketone	ND	5.0	90	91	1.1	80	88	9.5	70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	108	111	2.7	94	101	7.2	70 - 130	30
Methylene chloride	ND	5.0	89	92	3.3	78	83	6.2	70 - 130	30
Naphthalene	ND	5.0	99	101	2.0	101	103	2.0	70 - 130	30
n-Butylbenzene	ND	1.0	97	102	5.0	98	104	5.9	70 - 130	30
n-Propylbenzene	ND	1.0	95	99	4.1	93	99	6.3	70 - 130	30
o-Xylene	ND	2.0	97	99	2.0	96	102	6.1	70 - 130	30
p-Isopropyltoluene	ND	1.0	98	100	2.0	97	102	5.0	70 - 130	30
sec-Butylbenzene	ND	1.0	102	105	2.9	99	105	5.9	70 - 130	30
Styrene	ND	5.0	97	98	1.0	95	101	6.1	70 - 130	30
tert-Butylbenzene	ND	1.0	97	99	2.0	94	100	6.2	70 - 130	30
Tetrachloroethene	ND	5.0	91	94	3.2	92	98	6.3	70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	99	101	2.0	96	101	5.1	70 - 130	30
Toluene	ND	1.0	93	94	1.1	92	96	4.3	70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	94	96	2.1	82	88	7.1	70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	96	97	1.0	92	98	6.3	70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	116	118	1.7	103	115	11.0	70 - 130	30
Trichloroethene	ND	5.0	95	96	1.0	91	96	5.3	70 - 130	30
Trichlorofluoromethane	ND	5.0	95	98	3.1	103	103	0.0	70 - 130	30
Trichlorotrifluoroethane	ND	5.0	98	104	5.9	91	96	5.3	70 - 130	30
Vinyl chloride	ND	5.0	94	95	1.1	89	93	4.4	70 - 130	30
% 1,2-dichlorobenzene-d4	101	%	102	102	0.0	101	103	2.0	70 - 130	30
% Bromofluorobenzene	103	%	103	103	0.0	105	105	0.0	70 - 130	30
% Dibromofluoromethane	95	%	100	101	1.0	100	99	1.0	70 - 130	30
% Toluene-d8	103	%	102	102	0.0	103	102	1.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 444514 (ug/kg), QC Sample No: CB17678 (CB17429)

Polynuclear Aromatic HC - Soil

2-Methylnaphthalene	ND	230	61	65	6.3	60	57	5.1	30 - 130	30
Acenaphthene	ND	230	73	77	5.3	70	66	5.9	30 - 130	30
Acenaphthylene	ND	230	68	71	4.3	64	62	3.2	30 - 130	30
Anthracene	ND	230	75	78	3.9	71	72	1.4	30 - 130	30
Benz(a)anthracene	ND	230	74	77	4.0	70	72	2.8	30 - 130	30
Benzo(a)pyrene	ND	230	71	74	4.1	66	68	3.0	30 - 130	30
Benzo(b)fluoranthene	ND	230	76	80	5.1	68	70	2.9	30 - 130	30
Benzo(ghi)perylene	ND	230	72	76	5.4	68	69	1.5	30 - 130	30

QA/QC Data

SDG I.D.: GCB17425

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Benzo(k)fluoranthene	ND	230	73	76	4.0	70	72	2.8	30 - 130	30
Chrysene	ND	230	76	79	3.9	72	74	2.7	30 - 130	30
Dibenz(a,h)anthracene	ND	230	73	76	4.0	69	70	1.4	30 - 130	30
Fluoranthene	ND	230	75	78	3.9	71	72	1.4	30 - 130	30
Fluorene	ND	230	74	77	4.0	72	69	4.3	30 - 130	30
Indeno(1,2,3-cd)pyrene	ND	230	72	76	5.4	68	69	1.5	30 - 130	30
Naphthalene	ND	230	58	63	8.3	59	55	7.0	30 - 130	30
Phenanthrene	ND	230	74	77	4.0	70	70	0.0	30 - 130	30
Pyrene	ND	230	75	79	5.2	72	73	1.4	30 - 130	30
% 2-Fluorobiphenyl	60	%	60	63	4.9	57	55	3.6	30 - 130	30
% Nitrobenzene-d5	54	%	57	63	10.0	57	54	5.4	30 - 130	30
% Terphenyl-d14	61	%	64	66	3.1	60	62	3.3	30 - 130	30

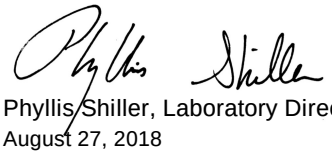
Comment:

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
August 27, 2018

Monday, August 27, 2018

Criteria: CT: GBM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCB17425 - TIGHE-DAS

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

*** No Data to Display ***

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.

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

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

Project Location: ROCKVILLE MGP ***Project Number:***

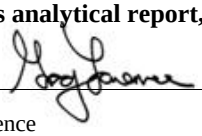
Laboratory Sample ID(s): CB17429 ***Sampling Date(s):*** 8/23/2018

List RCP Methods Used (e.g., 8260, 8270, et cetera) 8260, 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	***VPH and EPH methods only:*** **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 Reasonable Confidence Protocol documents acheived? See Section: ETPH Narration.**	☐ Yes ☑ No
5	**a) Were reporting limits specified or referenced on the chain-of-custody?** **b) Were these reporting limits met?**	☑ Yes ☐ No ☑ 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 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:** Monday, August 27, 2018

Name of Laboratory Phoenix Environmental Labs, Inc.

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

CTDEP RCP Laboratory Analysis QA/QC Certification Form - November 2007
Laboratory Quality Assurance and Quality Control Guidance Reasonable Confidence Protocols

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

August 27, 2018

SDG I.D.: GCB17425

SDG Comments

8270 Semi-volatile Organics: CB17429
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? No.

QC Batch 444516 (Samples: CB17429): -----

The LCS/LCSD RPD exceeds the method criteria. The Batch MS/MSD RPD is acceptable. These analytes were not reported in the sample(s). No significant variability is suspected.

Instrument:

AU-XL1 08/23/18-1 Adam Werner, Chemist 08/23/18

CB17429

The initial calibration (ETPH726I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 444516 (CB17295)

CB17429

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: Ext. Petroleum H.C. (C9-C36)(31.0%)
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.

SVOA Narration

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

Instrument:

CHEM06 08/23/18-2 Matt Richard, Chemist 08/23/18

CB17429

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 Verification (CHEM06/BN_0816):
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 (CHEM06/0823_31A-BN_0816):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.cb14841

100% of target compounds met criteria.

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

August 27, 2018

SDG I.D.: GCB17425

SVOA Narration

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 444514 (CB17678)

CB17429

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%)

VOA Narration

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

Instrument:

CHEM03 08/24/18-1 Jane Li, Chemist 08/24/18

CB17429

Initial Calibration Verification (CHEM03/VT-L0820):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromoform 21% (20%), Chloroethane 21% (20%), Trichlorofluoromethane 22% (20%)
The following compounds did not meet recommended response factors: Acetone 0.093 (0.1)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM03/0824L02-VT-L0820):
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 (Site Specific):

Batch 444939 (CB17429)

CB17429

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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.
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 30% with the following exceptions: None.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Cooler: Yes [X] No [ ]
Coolant: IPK [ ] ICE [X] No [ ]
Temp 2.6°C Pg 1 of 1

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

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

Contact Options:
[ ] Fax:
[ ] Phone:
[X] Email: LLWilley@TigheBond.com

Customer: Tighe + Bond
Address: 213 Court Street Suite 1100
Middletown CT

Project: Rockville MGP
Report to: Lynn Willey
Invoice to: Tighe + Bond

Project P.O: E-0755-448

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/23/14

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

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOC	PAH	ETPH	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container (8) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle
17425	SB-60 (9-10 FT)	S	9/23/14	10:35				3	1								
17426	SB-60 (17-19 FT)			10:40				3	1								
17427	SB-60 (25-27 FT)			10:50				3	1								
17428	SB-60 (31-33 FT)			11:05				3	1								
17429	SB-60 (40-42 FT)			11:35	X	X	X	3	1								

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9/23/14	15:21

Comments, Special Requirements or Regulations:
DAS rules. Quote: TS 012817BA
Please run SB-60 (40-42 FT) and hold other samples

Turnaround:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[X] Standard
[ ] Other
* SURCHARGE APPLIES

RI
[ ] Direct Exposure (Residential)
[ ] GW
[ ] Other

CT
[X] RCP Cert
[ ] GW Protection
[ ] SW Protection
[ ] GA Mobility
[X] GB Mobility
[X] Residential DEC
[ ] I/C DEC
[ ] Other

MA
[ ] MCP Certification
[ ] GW-1
[ ] GW-2
[ ] GW-3
[ ] S-1
[ ] S-2
[ ] S-3
[ ] MWRA eSMART
[ ] Other

State where samples were collected: CT

Data Format
[X] Excel
[X] PDF
[ ] GIS/Key
[ ] EQuIS
[X] Other

Data Package
[ ] Tier II Checklist
[ ] Full Data Package*
[X] Phoenix Std Report
[ ] Other
* SURCHARGE APPLIES

The Connecticut Light and Power Company
d/b/a Eversource Energy
Docket No. 26-05-10
Date Issued September 29, 2026
RSR-032 Attachment 17
Page 667 of 1282

PHOENIX
Environmental Laboratories, Inc.

Thursday, September 06, 2018

Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Project ID: ROCKVILLE MGP
Sample ID#s: CB20630 - CB20633

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 have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

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 06040
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Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

September 06, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		08/28/18	12:20
Location Code:	TIGHE-DAS	Received by:	SW	08/28/18	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCB20628
Phoenix ID: CB20630

Project ID: ROCKVILLE MGP
Client ID: SB-40A (5.5-7.5 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.34	0.34	mg/Kg	1	08/29/18	CPP	SW6010C
Arsenic	1.84	0.69	mg/Kg	1	08/29/18	CPP	SW6010C
Barium	92.7	0.34	mg/Kg	1	08/29/18	CPP	SW6010C
Beryllium	0.52	0.27	mg/Kg	1	08/29/18	CPP	SW6010C
Cadmium	0.40	0.34	mg/Kg	1	08/29/18	CPP	SW6010C
Chromium	11.8	0.34	mg/Kg	1	08/29/18	CPP	SW6010C
Copper	13.4	0.7	mg/kg	1	08/29/18	CPP	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	08/29/18	RS	SW7471B
Nickel	8.80	0.34	mg/Kg	1	08/29/18	CPP	SW6010C
Lead	1.30	0.34	mg/Kg	1	08/29/18	CPP	SW6010C
Antimony	< 3.4	3.4	mg/Kg	1	08/29/18	CPP	SW6010C
Selenium	< 1.4	1.4	mg/Kg	1	08/29/18	EK	SW6010C
SPLP Silver	< 0.010	0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Arsenic	< 0.004	0.004	mg/L	1	08/29/18	TH	SW6010C
SPLP Barium	0.003	J 0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Beryllium	< 0.001	0.001	mg/L	1	08/29/18	TH	SW6010C
SPLP Cadmium	< 0.005	0.005	mg/L	1	08/29/18	TH	SW6010C
SPLP Chromium	0.001	J 0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Copper	0.002	J 0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Mercury	< 0.0005	0.0005	mg/L	1	08/29/18	RS	SW7470A
SPLP Nickel	0.002	J 0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Lead	< 0.010	0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Antimony	< 0.005	0.005	mg/L	1	08/29/18	TH	SW6010C
SPLP Selenium	< 0.020	0.020	mg/L	1	08/29/18	TH	SW6010C
SPLP Thallium	< 0.005	0.005	mg/L	1	08/29/18	TH	SW6010C
SPLP Vanadium	0.002	J 0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Zinc	0.003	J 0.010	mg/L	1	08/29/18	TH	SW6010C
Thallium	< 3.1	3.1	mg/Kg	1	08/29/18	CPP	SW6010C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SB-40A (5.5-7.5 FT)

Phoenix I.D.: CB20630

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
SPLP Metals Digestion	Completed				08/29/18	I/I	SW3010A
Vanadium	49.3	0.34	mg/Kg	1	08/29/18	CPP	SW6010C
Zinc	54.9	0.7	mg/Kg	1	08/29/18	CPP	SW6010C
Percent Solid	90		%		08/28/18	AK	SW846-%Solid
Total Cyanide (SW9010C Distill.)	< 0.56	0.56	mg/Kg	1	08/30/18	O/GD	SW9012B
Soil Extraction SVOA PAH	Completed				08/28/18	BA/CKV	SW3545A
Extraction of CT ETPH	Completed				08/29/18	BA/VCK	SW3545A
Mercury Digestion	Completed				08/29/18	I/Q	SW7471B
SPLP Digestion Mercury	Completed				08/29/18	IQ/I	SW1312/SW7470A
SPLP Extraction for Metals	Completed				08/28/18	I	SW1312
Total Metals Digest	Completed				08/28/18	L/AG/BF	SW3050B
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	230	54	mg/Kg	1	08/30/18	JRB	CTETPH 8015D
Identification	**		mg/Kg	1	08/30/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	74		%	1	08/30/18	JRB	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	4.7	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloroethane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloroethene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloropropene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dibromoethane	ND	7.0	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichloroethane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichloropropane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
1,3-Dichloropropane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
2,2-Dichloropropane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
2-Chlorotoluene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
2-Hexanone	ND	39	ug/Kg	1	08/29/18	JLI	SW8260C
2-Isopropyltoluene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
4-Chlorotoluene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	39	ug/Kg	1	08/29/18	JLI	SW8260C
Acetone	ND	390	ug/Kg	1	08/29/18	JLI	SW8260C
Acrylonitrile	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Benzene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Bromobenzene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Bromochloromethane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SB-40A (5.5-7.5 FT)
Phoenix I.D.: CB20630

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Bromodichloromethane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Bromoform	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Bromomethane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Carbon Disulfide	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Carbon tetrachloride	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Chlorobenzene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Chloroethane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Chloroform	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Chloromethane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Dibromochloromethane	ND	4.7	ug/Kg	1	08/29/18	JLI	SW8260C
Dibromomethane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Dichlorodifluoromethane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Ethylbenzene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Hexachlorobutadiene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Isopropylbenzene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
m&p-Xylene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	47	ug/Kg	1	08/29/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	16	ug/Kg	1	08/29/18	JLI	SW8260C
Methylene chloride	ND	16	ug/Kg	1	08/29/18	JLI	SW8260C
Naphthalene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
n-Butylbenzene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
n-Propylbenzene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
o-Xylene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
p-Isopropyltoluene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
sec-Butylbenzene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Styrene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
tert-Butylbenzene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Tetrachloroethene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	16	ug/Kg	1	08/29/18	JLI	SW8260C
Toluene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Total Xylenes	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	16	ug/Kg	1	08/29/18	JLI	SW8260C
Trichloroethene	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Trichlorofluoromethane	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	16	ug/Kg	1	08/29/18	JLI	SW8260C
Vinyl chloride	ND	7.8	ug/Kg	1	08/29/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	96		%	1	08/29/18	JLI	70 - 130 %
% Bromofluorobenzene	97		%	1	08/29/18	JLI	70 - 130 %
% Dibromofluoromethane	106		%	1	08/29/18	JLI	70 - 130 %
% Toluene-d8	89		%	1	08/29/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	450	260	ug/Kg	1	08/29/18	KCA	SW8270D
Acenaphthene	ND	260	ug/Kg	1	08/29/18	KCA	SW8270D
Acenaphthylene	1600	260	ug/Kg	1	08/29/18	KCA	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SB-40A (5.5-7.5 FT)

Phoenix I.D.: CB20630

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Anthracene	ND	260	ug/Kg	1	08/29/18	KCA	SW8270D
Benz(a)anthracene	ND	260	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(a)pyrene	1100	260	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(b)fluoranthene	380	260	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(ghi)perylene	870	260	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(k)fluoranthene	290	260	ug/Kg	1	08/29/18	KCA	SW8270D
Chrysene	310	260	ug/Kg	1	08/29/18	KCA	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	08/29/18	KCA	SW8270D
Fluoranthene	ND	260	ug/Kg	1	08/29/18	KCA	SW8270D
Fluorene	ND	260	ug/Kg	1	08/29/18	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	930	260	ug/Kg	1	08/29/18	KCA	SW8270D
Naphthalene	510	260	ug/Kg	1	08/29/18	KCA	SW8270D
Phenanthrene	ND	260	ug/Kg	1	08/29/18	KCA	SW8270D
Pyrene	ND	260	ug/Kg	1	08/29/18	KCA	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	47		%	1	08/29/18	KCA	30 - 130 %
% Nitrobenzene-d5	43		%	1	08/29/18	KCA	30 - 130 %
% Terphenyl-d14	42		%	1	08/29/18	KCA	30 - 130 %
Field Extraction	Completed				08/28/18		SW5035A

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

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

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

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
September 06, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

September 06, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		08/28/18	13:15
Location Code:	TIGHE-DAS	Received by:	SW	08/28/18	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCB20628
Phoenix ID: CB20631

Project ID: ROCKVILLE MGP
Client ID: SB-39 (3-5 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.36	0.36	mg/Kg	1	08/29/18	TH	SW6010C
Arsenic	7.8	7.3	mg/Kg	10	08/29/18	CPP	SW6010C
Barium	55.3	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Beryllium	0.44	0.29	mg/Kg	1	08/29/18	TH	SW6010C
Cadmium	0.37	0.36	mg/Kg	1	08/29/18	TH	SW6010C
Chromium	20.3	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Copper	40.7	7.3	mg/kg	10	08/29/18	CPP	SW6010C
Mercury	0.22	0.14	mg/Kg	1	08/29/18	RS	SW7471B
Nickel	9.4	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Lead	68.8	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Antimony	< 3.6	3.6	mg/Kg	1	08/29/18	TH	SW6010C
Selenium	< 1.5	1.5	mg/Kg	1	08/29/18	TH	SW6010C
SPLP Silver	< 0.010	0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Arsenic	< 0.004	0.004	mg/L	1	08/29/18	TH	SW6010C
SPLP Barium	< 0.010	0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Beryllium	< 0.001	0.001	mg/L	1	08/29/18	TH	SW6010C
SPLP Cadmium	< 0.005	0.005	mg/L	1	08/29/18	TH	SW6010C
SPLP Chromium	< 0.010	0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Copper	< 0.010	0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Mercury	< 0.0005	0.0005	mg/L	1	08/29/18	RS	SW7470A
SPLP Nickel	< 0.010	0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Lead	< 0.010	0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Antimony	< 0.005	0.005	mg/L	1	08/29/18	TH	SW6010C
SPLP Selenium	< 0.020	0.020	mg/L	1	08/29/18	TH	SW6010C
SPLP Thallium	< 0.005	0.005	mg/L	1	08/29/18	TH	SW6010C
SPLP Vanadium	< 0.010	0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Zinc	< 0.010	0.010	mg/L	1	08/29/18	TH	SW6010C
Thallium	< 3.3	3.3	mg/Kg	1	08/29/18	TH	SW6010C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SB-39 (3-5 FT)

Phoenix I.D.: CB20631

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
SPLP Metals Digestion	Completed				08/29/18	I/I	SW3010A
Vanadium	26.4	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Zinc	67.3	7.3	mg/Kg	10	08/29/18	CPP	SW6010C
Percent Solid	86		%		08/28/18	AK	SW846-%Solid
Total Cyanide (SW9010C Distill.)	1.52	0.58	mg/Kg	1	08/30/18	O/GD	SW9012B
Soil Extraction SVOA PAH	Completed				08/28/18	BA/CKV	SW3545A
Extraction of CT ETPH	Completed				08/29/18	BA/VCK	SW3545A
Mercury Digestion	Completed				08/29/18	I/Q	SW7471B
SPLP Digestion Mercury	Completed				08/29/18	IQ/I	SW1312/SW7470A
SPLP Extraction for Metals	Completed				08/28/18	I	SW1312
Total Metals Digest	Completed				08/28/18	L/AG/BF	SW3050B
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	1200	290	mg/Kg	5	08/30/18	JRB	CTETPH 8015D
Identification	**		mg/Kg	5	08/30/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	85		%	5	08/30/18	JRB	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloroethane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloroethene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloropropene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dibromoethane	ND	7.0	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichloroethane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichloropropane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
1,3-Dichloropropane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
2,2-Dichloropropane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
2-Chlorotoluene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
2-Hexanone	ND	83	ug/Kg	1	08/29/18	JLI	SW8260C
2-Isopropyltoluene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
4-Chlorotoluene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	83	ug/Kg	1	08/29/18	JLI	SW8260C
Acetone	ND	830	ug/Kg	1	08/29/18	JLI	SW8260C
Acrylonitrile	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Benzene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Bromobenzene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Bromochloromethane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SB-39 (3-5 FT)

Phoenix I.D.: CB20631

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Bromodichloromethane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Bromoform	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Bromomethane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Carbon Disulfide	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Carbon tetrachloride	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Chlorobenzene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Chloroethane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Chloroform	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Chloromethane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Dibromochloromethane	ND	10	ug/Kg	1	08/29/18	JLI	SW8260C
Dibromomethane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Dichlorodifluoromethane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Ethylbenzene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Hexachlorobutadiene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Isopropylbenzene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
m&p-Xylene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	100	ug/Kg	1	08/29/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	33	ug/Kg	1	08/29/18	JLI	SW8260C
Methylene chloride	ND	33	ug/Kg	1	08/29/18	JLI	SW8260C
Naphthalene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
n-Butylbenzene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
n-Propylbenzene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
o-Xylene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
p-Isopropyltoluene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
sec-Butylbenzene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Styrene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
tert-Butylbenzene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Tetrachloroethene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	33	ug/Kg	1	08/29/18	JLI	SW8260C
Toluene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Total Xylenes	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	33	ug/Kg	1	08/29/18	JLI	SW8260C
Trichloroethene	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Trichlorofluoromethane	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	33	ug/Kg	1	08/29/18	JLI	SW8260C
Vinyl chloride	ND	17	ug/Kg	1	08/29/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	97		%	1	08/29/18	JLI	70 - 130 %
% Bromofluorobenzene	84		%	1	08/29/18	JLI	70 - 130 %
% Dibromofluoromethane	110		%	1	08/29/18	JLI	70 - 130 %
% Toluene-d8	86		%	1	08/29/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	ND	1300	ug/Kg	5	08/29/18	KCA	SW8270D
Acenaphthene	ND	1300	ug/Kg	5	08/29/18	KCA	SW8270D
Acenaphthylene	6500	1300	ug/Kg	5	08/29/18	KCA	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SB-39 (3-5 FT)

Phoenix I.D.: CB20631

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Anthracene	1900	1300	ug/Kg	5	08/29/18	KCA	SW8270D
Benz(a)anthracene	3500	1000	ug/Kg	5	08/29/18	KCA	SW8270D
Benzo(a)pyrene	20000	1000	ug/Kg	5	08/29/18	KCA	SW8270D
Benzo(b)fluoranthene	10000	1000	ug/Kg	5	08/29/18	KCA	SW8270D
Benzo(ghi)perylene	14000	1000	ug/Kg	5	08/29/18	KCA	SW8270D
Benzo(k)fluoranthene	11000	1000	ug/Kg	5	08/29/18	KCA	SW8270D
Chrysene	5600	1000	ug/Kg	5	08/29/18	KCA	SW8270D
Dibenz(a,h)anthracene	2400	1000	ug/Kg	5	08/29/18	KCA	SW8270D
Fluoranthene	2500	1300	ug/Kg	5	08/29/18	KCA	SW8270D
Fluorene	ND	1300	ug/Kg	5	08/29/18	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	15000	1000	ug/Kg	5	08/29/18	KCA	SW8270D
Naphthalene	ND	1300	ug/Kg	5	08/29/18	KCA	SW8270D
Phenanthrene	ND	1300	ug/Kg	5	08/29/18	KCA	SW8270D
Pyrene	6700	1300	ug/Kg	5	08/29/18	KCA	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	61		%	5	08/29/18	KCA	30 - 130 %
% Nitrobenzene-d5	56		%	5	08/29/18	KCA	30 - 130 %
% Terphenyl-d14	52		%	5	08/29/18	KCA	30 - 130 %
Field Extraction	Completed				08/28/18		SW5035A

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:

Semi-Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

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

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
September 06, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

September 06, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		08/28/18	14:05
Location Code:	TIGHE-DAS	Received by:	SW	08/28/18	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCB20628
Phoenix ID: CB20632

Project ID: ROCKVILLE MGP
Client ID: SB-53 (3-5 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.36	0.36	mg/Kg	1	08/29/18	TH	SW6010C
Arsenic	16.9	7.1	mg/Kg	10	08/29/18	CPP	SW6010C
Barium	57.7	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Beryllium	0.49	0.28	mg/Kg	1	08/29/18	TH	SW6010C
Cadmium	0.47	0.36	mg/Kg	1	08/29/18	TH	SW6010C
Chromium	14.1	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Copper	99.8	0.7	mg/kg	1	08/29/18	TH	SW6010C
Mercury	0.26	0.15	mg/Kg	1	08/29/18	RS	SW7471B
Nickel	25.2	0.36	mg/Kg	1	08/29/18	TH	SW6010C
Lead	110	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Antimony	< 3.6	3.6	mg/Kg	1	08/29/18	TH	SW6010C
Selenium	< 1.4	1.4	mg/Kg	1	08/29/18	TH	SW6010C
Thallium	< 3.2	3.2	mg/Kg	1	08/29/18	TH	SW6010C
Vanadium	19.0	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Zinc	125	0.7	mg/Kg	1	08/29/18	TH	SW6010C
Percent Solid	88		%		08/28/18	AK	SW846-%Solid
Total Cyanide (SW9010C Distill.)	0.60	0.57	mg/Kg	1	08/30/18	O/GD	SW9012B
Soil Extraction SVOA PAH	Completed				08/28/18	BA/CKV	SW3545A
Extraction of CT ETPH	Completed				08/31/18	JJ	SW3545A
Mercury Digestion	Completed				08/29/18	I/Q	SW7471B
Total Metals Digest	Completed				08/28/18	L/AG/BF	SW3050B
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	130	56	mg/Kg	1	09/04/18	JRB	CTETPH 8015D
Identification	**		mg/Kg	1	09/04/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	97		%	1	09/04/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SB-53 (3-5 FT)

Phoenix I.D.: CB20632

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.7	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloroethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloroethene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloropropene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dibromoethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichloroethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichloropropane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,3-Dichloropropane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
2,2-Dichloropropane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
2-Chlorotoluene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
2-Hexanone	ND	31	ug/Kg	1	08/29/18	JLI	SW8260C
2-Isopropyltoluene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
4-Chlorotoluene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	31	ug/Kg	1	08/29/18	JLI	SW8260C
Acetone	ND	310	ug/Kg	1	08/29/18	JLI	SW8260C
Acrylonitrile	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Benzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Bromobenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Bromochloromethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Bromodichloromethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Bromoform	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Bromomethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Carbon Disulfide	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Carbon tetrachloride	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Chlorobenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Chloroethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Chloroform	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Chloromethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Dibromochloromethane	ND	3.7	ug/Kg	1	08/29/18	JLI	SW8260C
Dibromomethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Dichlorodifluoromethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Ethylbenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Hexachlorobutadiene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Isopropylbenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SB-53 (3-5 FT)

Phoenix I.D.: CB20632

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	37	ug/Kg	1	08/29/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	12	ug/Kg	1	08/29/18	JLI	SW8260C
Methylene chloride	ND	12	ug/Kg	1	08/29/18	JLI	SW8260C
Naphthalene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
n-Butylbenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
n-Propylbenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
o-Xylene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
p-Isopropyltoluene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
sec-Butylbenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Styrene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
tert-Butylbenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Tetrachloroethene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	12	ug/Kg	1	08/29/18	JLI	SW8260C
Toluene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Total Xylenes	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	12	ug/Kg	1	08/29/18	JLI	SW8260C
Trichloroethene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Trichlorofluoromethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	12	ug/Kg	1	08/29/18	JLI	SW8260C
Vinyl chloride	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	08/29/18	JLI	70 - 130 %
% Bromofluorobenzene	84		%	1	08/29/18	JLI	70 - 130 %
% Dibromofluoromethane	115		%	1	08/29/18	JLI	70 - 130 %
% Toluene-d8	90		%	1	08/29/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	ND	260	ug/Kg	1	08/29/18	KCA	SW8270D
Acenaphthene	ND	260	ug/Kg	1	08/29/18	KCA	SW8270D
Acenaphthylene	720	260	ug/Kg	1	08/29/18	KCA	SW8270D
Anthracene	650	260	ug/Kg	1	08/29/18	KCA	SW8270D
Benz(a)anthracene	3700	260	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(a)pyrene	4400	260	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(b)fluoranthene	4100	260	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(ghi)perylene	2400	260	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(k)fluoranthene	3400	260	ug/Kg	1	08/29/18	KCA	SW8270D
Chrysene	4600	260	ug/Kg	1	08/29/18	KCA	SW8270D
Dibenz(a,h)anthracene	880	260	ug/Kg	1	08/29/18	KCA	SW8270D
Fluoranthene	3700	260	ug/Kg	1	08/29/18	KCA	SW8270D
Fluorene	ND	260	ug/Kg	1	08/29/18	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	2500	260	ug/Kg	1	08/29/18	KCA	SW8270D
Naphthalene	380	260	ug/Kg	1	08/29/18	KCA	SW8270D
Phenanthrene	1500	260	ug/Kg	1	08/29/18	KCA	SW8270D
Pyrene	5000	260	ug/Kg	1	08/29/18	KCA	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	65		%	1	08/29/18	KCA	30 - 130 %
% Nitrobenzene-d5	62		%	1	08/29/18	KCA	30 - 130 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SB-53 (3-5 FT)

Phoenix I.D.: CB20632

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Terphenyl-d14	58		%	1	08/29/18	KCA	30 - 130 %
Field Extraction	Completed				08/28/18		SW5035A

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:

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C14 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

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

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
September 06, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

September 06, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		08/28/18	13:16
Location Code:	TIGHE-DAS	Received by:	SW	08/28/18	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCB20628
Phoenix ID: CB20633

Project ID: ROCKVILLE MGP
Client ID: DUP-102

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.36	0.36	mg/Kg	1	08/29/18	TH	SW6010C
Arsenic	4.62	0.73	mg/Kg	1	08/29/18	TH	SW6010C
Barium	72.5	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Beryllium	0.51	0.29	mg/Kg	1	08/29/18	TH	SW6010C
Cadmium	1.10	0.36	mg/Kg	1	08/29/18	TH	SW6010C
Chromium	16.4	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Copper	13.5	7.3	mg/kg	10	08/29/18	CPP	SW6010C
Mercury	0.06	0.03	mg/Kg	1	08/29/18	RS	SW7471B
Nickel	9.9	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Lead	13.2	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Antimony	< 3.6	3.6	mg/Kg	1	08/29/18	TH	SW6010C
Selenium	< 1.5	1.5	mg/Kg	1	08/29/18	TH	SW6010C
SPLP Silver	< 0.010	0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Arsenic	< 0.004	0.004	mg/L	1	08/29/18	TH	SW6010C
SPLP Barium	0.017	0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Beryllium	< 0.001	0.001	mg/L	1	08/29/18	TH	SW6010C
SPLP Cadmium	< 0.005	0.005	mg/L	1	08/29/18	TH	SW6010C
SPLP Chromium	< 0.010	0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Copper	0.011	0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Mercury	< 0.0005	0.0005	mg/L	1	08/29/18	RS	SW7470A
SPLP Nickel	< 0.010	0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Lead	< 0.010	0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Antimony	< 0.005	0.005	mg/L	1	08/29/18	TH	SW6010C
SPLP Selenium	< 0.020	0.020	mg/L	1	08/29/18	TH	SW6010C
SPLP Thallium	< 0.005	0.005	mg/L	1	08/29/18	TH	SW6010C
SPLP Vanadium	< 0.010	0.010	mg/L	1	08/29/18	TH	SW6010C
SPLP Zinc	0.014	0.010	mg/L	1	08/29/18	TH	SW6010C
Thallium	< 3.3	3.3	mg/Kg	1	08/29/18	TH	SW6010C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: DUP-102

Phoenix I.D.: CB20633

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
SPLP Metals Digestion	Completed				08/29/18	I/I	SW3010A
Vanadium	52.2	0.36	mg/Kg	1	08/29/18	TH	SW6010C
Zinc	132	0.7	mg/Kg	1	08/29/18	TH	SW6010C
Percent Solid	84		%		08/28/18	AK	SW846-%Solid
Total Cyanide (SW9010C Distill.)	2.33	0.60	mg/Kg	1	08/30/18	O/GD	SW9012B
Soil Extraction SVOA PAH	Completed				08/28/18	BA/CKV	SW3545A
Extraction of CT ETPH	Completed				08/29/18	BA/VCK	SW3545A
Mercury Digestion	Completed				08/29/18	I/Q	SW7471B
SPLP Digestion Mercury	Completed				08/29/18	IQ/I	SW1312/SW7470A
SPLP Extraction for Metals	Completed				08/28/18	I	SW1312
Total Metals Digest	Completed				08/28/18	L/AG/BF	SW3050B
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	1100	300	mg/Kg	5	08/30/18	JRB	CTETPH 8015D
Identification	**		mg/Kg	5	08/30/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	79		%	5	08/30/18	JRB	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	11	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloroethane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloroethene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloropropene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dibromoethane	ND	7.0	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichloroethane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichloropropane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
1,3-Dichloropropane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
2,2-Dichloropropane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
2-Chlorotoluene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
2-Hexanone	ND	96	ug/Kg	1	08/29/18	JLI	SW8260C
2-Isopropyltoluene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
4-Chlorotoluene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	96	ug/Kg	1	08/29/18	JLI	SW8260C
Acetone	ND	960	ug/Kg	1	08/29/18	JLI	SW8260C
Acrylonitrile	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Benzene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Bromobenzene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Bromochloromethane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: DUP-102

Phoenix I.D.: CB20633

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Bromodichloromethane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Bromoform	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Bromomethane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Carbon Disulfide	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Carbon tetrachloride	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Chlorobenzene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Chloroethane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Chloroform	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Chloromethane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Dibromochloromethane	ND	11	ug/Kg	1	08/29/18	JLI	SW8260C
Dibromomethane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Dichlorodifluoromethane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Ethylbenzene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Hexachlorobutadiene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Isopropylbenzene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
m&p-Xylene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	110	ug/Kg	1	08/29/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	38	ug/Kg	1	08/29/18	JLI	SW8260C
Methylene chloride	ND	38	ug/Kg	1	08/29/18	JLI	SW8260C
Naphthalene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
n-Butylbenzene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
n-Propylbenzene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
o-Xylene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
p-Isopropyltoluene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
sec-Butylbenzene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Styrene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
tert-Butylbenzene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Tetrachloroethene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	38	ug/Kg	1	08/29/18	JLI	SW8260C
Toluene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Total Xylenes	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	38	ug/Kg	1	08/29/18	JLI	SW8260C
Trichloroethene	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Trichlorofluoromethane	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	38	ug/Kg	1	08/29/18	JLI	SW8260C
Vinyl chloride	ND	19	ug/Kg	1	08/29/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	97		%	1	08/29/18	JLI	70 - 130 %
% Bromofluorobenzene	85		%	1	08/29/18	JLI	70 - 130 %
% Dibromofluoromethane	114		%	1	08/29/18	JLI	70 - 130 %
% Toluene-d8	86		%	1	08/29/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	3600	1400	ug/Kg	5	08/29/18	KCA	SW8270D
Acenaphthene	ND	1400	ug/Kg	5	08/29/18	KCA	SW8270D
Acenaphthylene	26000	1400	ug/Kg	5	08/29/18	KCA	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: DUP-102

Phoenix I.D.: CB20633

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Anthracene	7300	1400	ug/Kg	5	08/29/18	KCA	SW8270D
Benz(a)anthracene	22000	1000	ug/Kg	5	08/29/18	KCA	SW8270D
Benzo(a)pyrene	44000	3900	ug/Kg	50	08/30/18	KCA	SW8270D
Benzo(b)fluoranthene	28000	3900	ug/Kg	50	08/30/18	KCA	SW8270D
Benzo(ghi)perylene	41000	3900	ug/Kg	50	08/30/18	KCA	SW8270D
Benzo(k)fluoranthene	34000	1000	ug/Kg	5	08/29/18	KCA	SW8270D
Chrysene	33000	1000	ug/Kg	5	08/29/18	KCA	SW8270D
Dibenz(a,h)anthracene	6200	1000	ug/Kg	5	08/29/18	KCA	SW8270D
Fluoranthene	15000	1400	ug/Kg	5	08/29/18	KCA	SW8270D
Fluorene	2400	1400	ug/Kg	5	08/29/18	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	38000	1000	ug/Kg	5	08/29/18	KCA	SW8270D
Naphthalene	5400	1400	ug/Kg	5	08/29/18	KCA	SW8270D
Phenanthrene	2900	1400	ug/Kg	5	08/29/18	KCA	SW8270D
Pyrene	37000	1400	ug/Kg	5	08/29/18	KCA	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	68		%	5	08/29/18	KCA	30 - 130 %
% Nitrobenzene-d5	67		%	5	08/29/18	KCA	30 - 130 %
% Terphenyl-d14	60		%	5	08/29/18	KCA	30 - 130 %
Field Extraction	Completed				08/28/18		SW5035A

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:

Semi-Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

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

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
September 06, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

QA/QC Report

September 06, 2018

QA/QC Data

SDG I.D.: GCB20628

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 445243 (mg/L), QC Sample No: CB07656 (CB20630, CB20631, CB20633)														
Mercury - Water	BRL	0.0002	<0.0002	<0.0002	NC	88.1			91.2			80 - 120	20	
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 445239 (mg/kg), QC Sample No: CB20611 (CB20630, CB20631, CB20632, CB20633)														
Mercury - Soil	BRL	0.02	<0.03	<0.03	NC	86.0	84.6	1.6	94.2			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 445221 (mg/kg), QC Sample No: CB20630 (CB20630, CB20631, CB20632, CB20633)														
ICP Metals - Soil														
Antimony	BRL	3.0	<3.4	<3.6	NC	96.6			81.1			75 - 125	30	
Arsenic	BRL	0.60	1.84	2.42	NC	102			89.7			75 - 125	30	
Barium	BRL	0.30	92.7	66.1	33.5	105			110			75 - 125	30	r
Beryllium	BRL	0.24	0.52	0.60	NC	106			95.7			75 - 125	30	
Cadmium	BRL	0.30	0.40	0.46	NC	101			93.7			75 - 125	30	
Chromium	BRL	0.30	11.8	14.9	23.2	111			95.7			75 - 125	30	
Copper	BRL	0.60	13.4	14.9	10.6	106			101			75 - 125	30	
Lead	BRL	0.30	1.30	2.30	NC	107			94.3			75 - 125	30	
Nickel	BRL	0.30	8.80	10.0	12.8	104			94.1			75 - 125	30	
Selenium	BRL	1.2	<1.4	<1.4	NC	81.8			98.1			75 - 125	30	
Silver	BRL	0.30	<0.34	<0.36	NC	101			91.3			75 - 125	30	
Thallium	BRL	2.7	<3.1	<3.2	NC	101			92.7			75 - 125	30	
Vanadium	BRL	0.30	49.3	53.0	7.20	117			107			75 - 125	30	
Zinc	BRL	0.60	54.9	58.6	6.50	101			95.7			75 - 125	30	
QA/QC Batch 445245 (mg/L), QC Sample No: CB20630 (CB20630, CB20631, CB20633)														
ICP Metals - SPLP Extraction														
Antimony	BRL	0.005	<0.005	<0.005	NC	102			102			75 - 125	20	
Arsenic	BRL	0.004	<0.004	<0.004	NC	103			102			75 - 125	20	
Barium	BRL	0.010	0.003	0.003	NC	101			101			75 - 125	20	
Beryllium	BRL	0.001	<0.001	<0.001	NC	104			104			75 - 125	20	
Cadmium	BRL	0.005	<0.005	<0.005	NC	102			102			75 - 125	20	
Chromium	BRL	0.010	0.001	0.002	NC	101			101			75 - 125	20	
Copper	BRL	0.010	0.002	0.001	NC	100			101			75 - 125	20	
Lead	BRL	0.010	<0.010	<0.010	NC	102			102			75 - 125	20	
Nickel	BRL	0.010	0.002	0.001	NC	101			102			75 - 125	20	
Selenium	BRL	0.020	<0.020	<0.020	NC	106			105			75 - 125	20	
Silver	BRL	0.010	<0.010	<0.010	NC	98.5			98.4			75 - 125	20	
Thallium	BRL	0.005	<0.005	<0.005	NC	102			101			75 - 125	20	
Vanadium	BRL	0.010	0.002	0.001	NC	100			100			75 - 125	20	
Zinc	BRL	0.010	0.003	0.003	NC	102			101			75 - 125	20	

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

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

QA/QC Report

September 06, 2018

QA/QC Data

SDG I.D.: GCB20628

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 445349 (mg/Kg), QC Sample No: CB19799 50X (CB20630)													
Total Cyanide (SW9010C Distill.)	BRL	0.50	<0.56	<0.51	NC	97.7			112			80 - 120	30
Comment:													
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils													
QA/QC Batch 445368 (mg/Kg), QC Sample No: CB20631 50X (CB20631, CB20632, CB20633)													
Total Cyanide (SW9010C Distill.)	BRL	0.50	1.52	1.28	NC	103			108			80 - 120	30
Comment:													
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils													

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

September 06, 2018

QA/QC Data

SDG I.D.: GCB20628

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 445176 (ug/kg), QC Sample No: CB20488 (CB20630, CB20631, CB20632, CB20633)											
Semivolatiles - Soil											
2-Methylnaphthalene	ND	230	68	65	4.5	64	49	26.5	30 - 130	30	
Acenaphthene	ND	230	73	70	4.2	71	54	27.2	30 - 130	30	
Acenaphthylene	ND	130	71	67	5.8	68	51	28.6	30 - 130	30	
Anthracene	ND	230	75	72	4.1	73	55	28.1	30 - 130	30	
Benz(a)anthracene	ND	230	77	72	6.7	72	53	30.4	30 - 130	30	
Benzo(a)pyrene	ND	130	76	71	6.8	71	52	30.9	30 - 130	30	r
Benzo(b)fluoranthene	ND	160	77	72	6.7	72	54	28.6	30 - 130	30	
Benzo(ghi)perylene	ND	230	79	78	1.3	69	53	26.2	30 - 130	30	
Benzo(k)fluoranthene	ND	230	81	74	9.0	75	56	29.0	30 - 130	30	
Chrysene	ND	230	79	75	5.2	74	55	29.5	30 - 130	30	
Dibenz(a,h)anthracene	ND	130	88	85	3.5	77	58	28.1	30 - 130	30	
Fluoranthene	ND	230	75	70	6.9	72	54	28.6	30 - 130	30	
Fluorene	ND	230	76	72	5.4	74	54	31.3	30 - 130	30	r
Indeno(1,2,3-cd)pyrene	ND	230	80	76	5.1	69	52	28.1	30 - 130	30	
Naphthalene	ND	230	61	59	3.3	61	47	25.9	30 - 130	30	
Phenanthrene	ND	130	74	71	4.1	71	54	27.2	30 - 130	30	
Pyrene	ND	230	76	71	6.8	72	55	26.8	30 - 130	30	
% 2-Fluorobiphenyl	62	%	65	62	4.7	64	48	28.6	30 - 130	30	
% Nitrobenzene-d5	54	%	62	58	6.7	61	45	30.2	30 - 130	30	
% Terphenyl-d14	67	%	63	59	6.6	60	46	26.4	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%)											
QA/QC Batch 445496 (ug/kg), QC Sample No: CB20635 (CB20630, CB20631, CB20632, CB20633)											
Volatiles - Soil											
1,1,1,2-Tetrachloroethane	ND	5.0	87	90	3.4	89	88	1.1	70 - 130	30	
1,1,1-Trichloroethane	ND	5.0	97	100	3.0	100	103	3.0	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	3.0	92	93	1.1	95	90	5.4	70 - 130	30	
1,1,2-Trichloroethane	ND	5.0	92	93	1.1	96	90	6.5	70 - 130	30	
1,1-Dichloroethane	ND	5.0	101	106	4.8	103	103	0.0	70 - 130	30	
1,1-Dichloroethene	ND	5.0	107	110	2.8	99	101	2.0	70 - 130	30	
1,1-Dichloropropene	ND	5.0	96	94	2.1	94	93	1.1	70 - 130	30	
1,2,3-Trichlorobenzene	ND	5.0	90	90	0.0	93	93	0.0	70 - 130	30	
1,2,3-Trichloropropane	ND	5.0	87	89	2.3	91	85	6.8	70 - 130	30	
1,2,4-Trichlorobenzene	ND	5.0	86	83	3.6	86	88	2.3	70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	87	88	1.1	90	88	2.2	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	100	97	3.0	87	90	3.4	70 - 130	30	
1,2-Dibromoethane	ND	5.0	88	89	1.1	89	87	2.3	70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	93	97	4.2	97	97	0.0	70 - 130	30	
1,2-Dichloroethane	ND	5.0	100	101	1.0	99	96	3.1	70 - 130	30	
1,2-Dichloropropane	ND	5.0	95	98	3.1	98	98	0.0	70 - 130	30	

QA/QC Data

SDG I.D.: GCB20628

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,3,5-Trimethylbenzene	ND	1.0	85	85	0.0	87	87	0.0	70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	87	90	3.4	90	90	0.0	70 - 130	30	
1,3-Dichloropropane	ND	5.0	85	87	2.3	86	85	1.2	70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	92	96	4.3	96	93	3.2	70 - 130	30	
2,2-Dichloropropane	ND	5.0	96	100	4.1	97	99	2.0	70 - 130	30	
2-Chlorotoluene	ND	5.0	88	91	3.4	89	88	1.1	70 - 130	30	
2-Hexanone	ND	25	82	86	4.8	82	78	5.0	70 - 130	30	
2-Isopropyltoluene	ND	5.0	95	98	3.1	99	98	1.0	70 - 130	30	
4-Chlorotoluene	ND	5.0	85	86	1.2	87	85	2.3	70 - 130	30	
4-Methyl-2-pentanone	ND	25	100	98	2.0	97	91	6.4	70 - 130	30	
Acetone	ND	10	79	81	2.5	69	62	10.7	70 - 130	30	m
Acrylonitrile	ND	5.0	104	105	1.0	106	104	1.9	70 - 130	30	
Benzene	ND	1.0	96	96	0.0	95	94	1.1	70 - 130	30	
Bromobenzene	ND	5.0	91	96	5.3	94	93	1.1	70 - 130	30	
Bromochloromethane	ND	5.0	90	96	6.5	97	97	0.0	70 - 130	30	
Bromodichloromethane	ND	5.0	95	96	1.0	94	94	0.0	70 - 130	30	
Bromoform	ND	5.0	79	83	4.9	80	79	1.3	70 - 130	30	
Bromomethane	ND	5.0	104	110	5.6	98	106	7.8	70 - 130	30	
Carbon Disulfide	ND	5.0	104	108	3.8	103	106	2.9	70 - 130	30	
Carbon tetrachloride	ND	5.0	93	97	4.2	95	96	1.0	70 - 130	30	
Chlorobenzene	ND	5.0	92	92	0.0	95	92	3.2	70 - 130	30	
Chloroethane	ND	5.0	115	120	4.3	77	78	1.3	70 - 130	30	
Chloroform	ND	5.0	91	94	3.2	91	91	0.0	70 - 130	30	
Chloromethane	ND	5.0	96	97	1.0	99	97	2.0	70 - 130	30	
cis-1,2-Dichloroethene	ND	5.0	98	101	3.0	105	105	0.0	70 - 130	30	
cis-1,3-Dichloropropene	ND	5.0	98	97	1.0	97	94	3.1	70 - 130	30	
Dibromochloromethane	ND	3.0	90	94	4.3	90	90	0.0	70 - 130	30	
Dibromomethane	ND	5.0	98	97	1.0	97	94	3.1	70 - 130	30	
Dichlorodifluoromethane	ND	5.0	89	80	10.7	81	77	5.1	70 - 130	30	
Ethylbenzene	ND	1.0	87	90	3.4	90	89	1.1	70 - 130	30	
Hexachlorobutadiene	ND	5.0	88	72	20.0	95	95	0.0	70 - 130	30	
Isopropylbenzene	ND	1.0	86	90	4.5	89	89	0.0	70 - 130	30	
m&p-Xylene	ND	2.0	83	87	4.7	86	85	1.2	70 - 130	30	
Methyl ethyl ketone	ND	5.0	91	93	2.2	88	90	2.2	70 - 130	30	
Methyl t-butyl ether (MTBE)	ND	1.0	106	111	4.6	112	110	1.8	70 - 130	30	
Methylene chloride	ND	5.0	90	95	5.4	94	95	1.1	70 - 130	30	
Naphthalene	ND	5.0	93	96	3.2	91	94	3.2	70 - 130	30	
n-Butylbenzene	ND	1.0	87	84	3.5	91	90	1.1	70 - 130	30	
n-Propylbenzene	ND	1.0	86	88	2.3	90	89	1.1	70 - 130	30	
o-Xylene	ND	2.0	89	92	3.3	90	90	0.0	70 - 130	30	
p-Isopropyltoluene	ND	1.0	86	87	1.2	91	90	1.1	70 - 130	30	
sec-Butylbenzene	ND	1.0	91	92	1.1	94	93	1.1	70 - 130	30	
Styrene	ND	5.0	84	85	1.2	85	85	0.0	70 - 130	30	
tert-Butylbenzene	ND	1.0	90	92	2.2	91	90	1.1	70 - 130	30	
Tetrachloroethene	ND	5.0	97	92	5.3	99	97	2.0	70 - 130	30	
Tetrahydrofuran (THF)	ND	5.0	100	104	3.9	105	102	2.9	70 - 130	30	
Toluene	ND	1.0	98	97	1.0	98	97	1.0	70 - 130	30	
trans-1,2-Dichloroethene	ND	5.0	104	107	2.8	107	107	0.0	70 - 130	30	
trans-1,3-Dichloropropene	ND	5.0	91	90	1.1	89	89	0.0	70 - 130	30	
trans-1,4-dichloro-2-butene	ND	5.0	91	95	4.3	87	86	1.2	70 - 130	30	
Trichloroethene	ND	5.0	95	96	1.0	96	94	2.1	70 - 130	30	
Trichlorofluoromethane	ND	5.0	109	110	0.9	102	100	2.0	70 - 130	30	
Trichlorotrifluoroethane	ND	5.0	105	103	1.9	99	109	9.6	70 - 130	30	

QA/QC Data

SDG I.D.: GCB20628

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Vinyl chloride	ND	5.0	110	109	0.9	110	113	2.7	70 - 130	30
% 1,2-dichlorobenzene-d4	93	%	103	104	1.0	104	104	0.0	70 - 130	30
% Bromofluorobenzene	98	%	98	98	0.0	100	97	3.0	70 - 130	30
% Dibromofluoromethane	114	%	99	103	4.0	100	107	6.8	70 - 130	30
% Toluene-d8	89	%	109	108	0.9	105	107	1.9	70 - 130	30

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 445319 (mg/Kg), QC Sample No: CB20739 (CB20630, CB20631, CB20633)

TPH by GC (Extractable Products) - Soil

Ext. Petroleum H.C. (C9-C36)	ND	50	74	87	16.1	94	89	5.5	60 - 120	30
% n-Pentacosane	62	%	75	88	16.0	89	83	7.0	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 445716 (mg/Kg), QC Sample No: CB23135 (CB20632)

TPH by GC (Extractable Products) - Soil

Ext. Petroleum H.C. (C9-C36)	ND	50	72	68	5.7				60 - 120	30
% n-Pentacosane	64	%	67	69	2.9				50 - 150	30

Comment:

*The MS/MSD could not be reported due to the presence of ETPH in the original sample. The LCS was within QA/QC criteria.

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.

m = This parameter is outside laboratory MS/MSD specified recovery limits.
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
September 06, 2018

Thursday, September 06, 2018

Criteria: CT: GBM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCB20628 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CB20630	$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	1100	260	1000	1000	ug/Kg
CB20630	$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1100	260	1000	1000	ug/Kg
CB20630	$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	1100	260	1000	1000	ug/Kg
CB20631	$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC I/C (mg/kg) / APS Organics	2400	1000	1000	1000	ug/Kg
CB20631	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC I/C (mg/kg) / APS Organics	15000	1000	7800	7800	ug/Kg
CB20631	$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	20000	1000	1000	1000	ug/Kg
CB20631	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	10000	1000	7800	7800	ug/Kg
CB20631	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	15000	1000	1000	1000	ug/Kg
CB20631	$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC RES (mg/kg) / APS Organics	2400	1000	1000	1000	ug/Kg
CB20631	$8100SMR	Benzo(ghi)perylene	CT / RSR DEC RES (mg/kg) / APS Organics	14000	1000	8400	8400	ug/Kg
CB20631	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	10000	1000	1000	1000	ug/Kg
CB20631	$8100SMR	Benzo(k)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	11000	1000	8400	8400	ug/Kg
CB20631	$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	3500	1000	1000	1000	ug/Kg
CB20631	$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	20000	1000	1000	1000	ug/Kg
CB20631	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	15000	1000	1000	1000	ug/Kg
CB20631	$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	14000	1000	1000	1000	ug/Kg
CB20631	$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	5600	1000	1000	1000	ug/Kg
CB20631	$8100SMR	Dibenz(a,h)anthracene	CT / RSR GB (mg/kg) / APS Organics	2400	1000	1000	1000	ug/Kg
CB20631	$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	3500	1000	1000	1000	ug/Kg
CB20631	$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	10000	1000	1000	1000	ug/Kg
CB20631	$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	20000	1000	1000	1000	ug/Kg
CB20631	$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	11000	1000	1000	1000	ug/Kg
CB20631	$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR DEC RES (mg/kg) / Pest/PCB/TPH	1200	290	500	500	mg/Kg
CB20632	$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	4400	260	1000	1000	ug/Kg
CB20632	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	2500	260	1000	1000	ug/Kg
CB20632	$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	4400	260	1000	1000	ug/Kg
CB20632	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	4100	260	1000	1000	ug/Kg
CB20632	$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	3700	260	1000	1000	ug/Kg
CB20632	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	2500	260	1000	1000	ug/Kg
CB20632	$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	4600	260	1000	1000	ug/Kg
CB20632	$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	2400	260	1000	1000	ug/Kg
CB20632	$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	3700	260	1000	1000	ug/Kg
CB20632	$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	3400	260	1000	1000	ug/Kg
CB20632	$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	4100	260	1000	1000	ug/Kg
CB20632	$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	4400	260	1000	1000	ug/Kg
CB20632	AS-SM	Arsenic	CT / RSR DEC I/C (mg/kg) / Inorganics	16.9	7.1	10	10	mg/Kg
CB20632	AS-SM	Arsenic	CT / RSR DEC RES (mg/kg) / Inorganics	16.9	7.1	10	10	mg/Kg
CB20633	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC I/C (mg/kg) / APS Organics	38000	1000	7800	7800	ug/Kg
CB20633	$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC I/C (mg/kg) / APS Organics	6200	1000	1000	1000	ug/Kg
CB20633	$8100SMR	Benz(a)anthracene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	22000	1000	7800	7800	ug/Kg

Thursday, September 06, 2018

Criteria: CT: GBM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCB20628 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CB20633	$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	44000	3900	1000	1000	ug/Kg
CB20633	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	28000	3900	7800	7800	ug/Kg
CB20633	$8100SMR	Benzo(ghi)perylene	CT / RSR DEC RES (mg/kg) / APS Organics	41000	3900	8400	8400	ug/Kg
CB20633	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	38000	1000	1000	1000	ug/Kg
CB20633	$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC RES (mg/kg) / APS Organics	6200	1000	1000	1000	ug/Kg
CB20633	$8100SMR	Benzo(k)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	34000	1000	8400	8400	ug/Kg
CB20633	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	28000	3900	1000	1000	ug/Kg
CB20633	$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	44000	3900	1000	1000	ug/Kg
CB20633	$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	22000	1000	1000	1000	ug/Kg
CB20633	$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	41000	3900	1000	1000	ug/Kg
CB20633	$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	33000	1000	1000	1000	ug/Kg
CB20633	$8100SMR	Dibenz(a,h)anthracene	CT / RSR GB (mg/kg) / APS Organics	6200	1000	1000	1000	ug/Kg
CB20633	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	38000	1000	1000	1000	ug/Kg
CB20633	$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	44000	3900	1000	1000	ug/Kg
CB20633	$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	34000	1000	1000	1000	ug/Kg
CB20633	$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	22000	1000	1000	1000	ug/Kg
CB20633	$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	28000	3900	1000	1000	ug/Kg
CB20633	$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR DEC RES (mg/kg) / Pest/PCB/TPH	1100	300	500	500	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 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.

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

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

Project Location: ROCKVILLE MGP ***Project Number:***

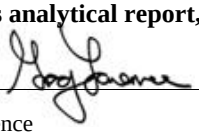
Laboratory Sample ID(s): CB20630-CB20633 ***Sampling Date(s):*** 8/28/2018

List RCP Methods Used (e.g., 8260, 8270, et cetera) 1311/1312, 6010, 7470/7471, 8260, 8270, ETPH, 9010/9012

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	***VPH and EPH methods only:*** **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 Reasonable Confidence Protocol documents acheived? See Section: ICP Narration.**	☐ Yes ☑ No
5	**a) Were reporting limits specified or referenced on the chain-of-custody?** **b) Were these reporting limits met?**	☑ Yes ☐ No ☑ 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 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:** Thursday, September 06, 2018

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

September 06, 2018

SDG I.D.: GCB20628

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.

Cyanide Narration

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

Instrument:

LACHAT 08/30/18-1 Dustin Harrison, Greg Danielewski, Chemist 08/30/18

CB20630, CB20631, CB20632, CB20633

The samples were distilled in accordance with the method.
The initial calibration met criteria.

The calibration check standards (ICV,CCV) were within 15% of true value and were analyzed at a frequencey of one per ten samples.
The continuing calibration blanks (ICB,CCB) had concentrations less than the reporting level.

The method blank, laboratory control sample (LCS), and matrix spike were distilled with the samples.

QC (Batch Specific):

Batch 445349 (CB19799)

CB20630

All LCS recoveries were within 80 - 120 with the following exceptions: None.
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils

QC (Site Specific):

Batch 445368 (CB20631)

CB20631, CB20632, CB20633

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils

ETPH Narration

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

Instrument:

AU-FID1 09/04/18-1 Jeff Bucko, Chemist 09/04/18

CB20632

The initial calibration (ETPH723I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-FID11 08/30/18-1 Jeff Bucko, Chemist 08/30/18

CB20631, CB20633

The initial calibration (ETPH728I) RSD for the compound list was less than 30% except for the following compounds: None.

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RCP Certification Report

September 06, 2018

SDG I.D.: GCB20628

ETPH Narration

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

AU-XL2 08/29/18-1 Jeff Bucko, Chemist 08/29/18

CB20630

The initial calibration (ETPH814I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 445319 (CB20739)

CB20630, CB20631, CB20633

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.

Batch 445716 (CB23135)

CB20632

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.
*The MS/MSD could not be reported due to the presence of ETPH in the original sample. The LCS was within QA/QC criteria.
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 08/29/18 08:52 Rick Schweitzer, Chemist 08/29/18

CB20630, CB20631, CB20632, CB20633

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 445239 (CB20611)

CB20630, CB20631, CB20632, CB20633

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

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NY # 11301

Certification Report

September 06, 2018

SDG I.D.: GCB20628

Mercury Narration

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 70-130%. MS acceptance range is 75-125%.

Batch 445243 (CB07656)

CB20630, CB20631, CB20633

All LCS recoveries were within 80 - 120 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 445221 (Samples: CB20630, CB20631, CB20632, CB20633): -----

The Sample/Duplicate RPD exceeds the method criteria for one analyte, therefore there may be variability in the reported result. (Barium)

Instrument:

ARCOS 08/29/18 08:56 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 08/29/

CB20630, CB20631, CB20632, CB20633

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 (Site Specific):

Batch 445221 (CB20630)

CB20630, CB20631, CB20632, CB20633

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

Batch 445245 (CB20630)

CB20630, CB20631, CB20633

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

SVOA Narration

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

Instrument:

CHEM06 08/29/18-1 Keith Aloisa, Chemist 08/29/18

CB20630, CB20631, CB20632, CB20633

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.

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RCP Certification Report

September 06, 2018

SDG I.D.: GCB20628

SVOA Narration

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

Initial Calibration Verification (CHEM06/SPLIT_0827):
93% 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 (CHEM06/0829_04-SPLIT_0827):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% 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.

CHEM06 08/30/18-1 Harry Mullin, Chemist 08/30/18

CB20633

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 Verification (CHEM06/bn_0827):
93% 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 (CHEM06/0830_04-bn_0827):
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 445176 (CB20488)

CB20630, CB20631, CB20632, CB20633

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%)

VOA Narration

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

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RCP Certification Report

September 06, 2018

SDG I.D.: GCB20628

VOA Narration

Instrument:

CHEM18 08/29/18-1 Jane Li, Chemist 08/29/18

CB20630, CB20631, CB20632, CB20633

Initial Calibration Verification (CHEM18/VT-M0817):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trichlorobenzene 21% (20%), Acetone 34% (20%), Methyl Ethyl Ketone 23% (20%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM18/0829M02-VT-M0817):
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 445496 (CB20635)

CB20630, CB20631, CB20632, CB20633

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Cooler: Yes ☒ No ☐
Coolant: IPK ☒ ICE ☐ No ☐

CHAIN OF CUSTODY RECORD

Temp 2.1 °C Pg 1 of 1

PHOENIX
Environmental Laboratories, Inc.

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

Data Delivery/Contact Options:
☐ Fax:
☐ Phone:
☒ Email: LEvilkey@tighebond.com

Customer: Tighe & Bond
Address: 213 Court Street Suite 1100
Middletown CT

Project: Rockville MGP
Report to: Lynn Willey
Invoice to: Tighe & Bond

Project P.O: 14-0755-4479

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 8/28/18

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

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOC	PAH	ETPH	RCP Metals	GW Protection Metals	Total Cyanide	GL Amber 8 oz. w/H3PO4	Soil VOA Vials ☒ methanol ☐ H2O	GL Soil container (4) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
20628	SB-40 (5.5-7.5 FT)	S	8/28/18	10:35							3	1										
20629	SB-40 (13-15 FT)			10:55								1										
20630	SB-40A (5.5-7.5')			12:20	X	X	X	X	X	X	3	1										
20631	SB-39 (3-5 FT)			13:15	X	X	X	X	X	X	3	1										
20632	SB-53 (3-5 FT)			14:05	X	X	X	X		X	3	1										
20633	DUP-108			13:16	X	X	X	X	X	X	3	1										

Relinquished by:	Accepted by:	Date:	Time:
[signature]	TTOum	8/28/18	1655

Comments, Special Requirements or Regulations:
DAS pricing
QUOTE #I012507B+
Please hold SB-40 samples

Turnaround:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☒ Standard
☐ Other
* SURCHARGE APPLIES

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☒ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☒ GB Mobility
☒ Residential DEC
☑ I/C DEC
☐ Other

MA
☐ MCP Certification
☐ GW-1
☐ GW-2
☐ GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: CT

Data Format
☒ Excel
☒ PDF
☐ GIS/Key
☐ EQuIS
☒ Other Geotech

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☒ Phoenix Std Report
☐ Other
* SURCHARGE APPLIES

The Connecticut Light and Power Company
d/b/a Eversource Energy
Docket No. 26-05-10
Date Issued September 29, 2026
RSR-032 Attachment 17
Page 698 of 1282

PHOENIX
Environmental Laboratories, Inc.

Thursday, September 13, 2018

Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Project ID: ROCKVILLE MGP
Sample ID#s: CB22894 - CB22897

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.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

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

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Environmental Laboratories, Inc.
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Analysis Report

September 13, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		08/30/18	8:20
Location Code:	TIGHE-DAS	Received by:	SW	08/31/18	14:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	E-0755-44B				

Laboratory Data

SDG ID: GCB22894
Phoenix ID: CB22894

Project ID: ROCKVILLE MGP
Client ID: HA-17 (1-2 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	1.06	0.36	mg/Kg	1	09/01/18	EK	SW6010C
Arsenic	3.72	0.71	mg/Kg	1	09/01/18	EK	SW6010C
Barium	178	0.36	mg/Kg	1	09/01/18	EK	SW6010C
Beryllium	0.33	0.29	mg/Kg	1	09/01/18	EK	SW6010C
Cadmium	2.39	0.36	mg/Kg	1	09/01/18	EK	SW6010C
Chromium	21.0	0.36	mg/Kg	1	09/01/18	EK	SW6010C
Copper	198	7.1	mg/kg	10	09/05/18	EK	SW6010C
Mercury	2.35	0.14	mg/Kg	1	09/04/18	RS	SW7471B
Nickel	14.2	0.36	mg/Kg	1	09/01/18	EK	SW6010C
Lead	169	3.6	mg/Kg	10	09/05/18	EK	SW6010C
Antimony	< 3.6	3.6	mg/Kg	1	09/01/18	EK	SW6010C
Selenium	< 1.4	1.4	mg/Kg	1	09/01/18	EK	SW6010C
SPLP Silver	< 0.010	0.010	mg/L	1	09/12/18	TH	SW6010C
SPLP Arsenic	< 0.004	0.004	mg/L	1	09/12/18	TH	SW6010C
SPLP Barium	0.024	0.010	mg/L	1	09/12/18	TH	SW6010C
SPLP Beryllium	< 0.001	0.001	mg/L	1	09/12/18	TH	SW6010C
SPLP Cadmium	< 0.005	0.005	mg/L	1	09/12/18	TH	SW6010C
SPLP Chromium	< 0.010	0.010	mg/L	1	09/12/18	TH	SW6010C
SPLP Copper	0.127	0.010	mg/L	1	09/12/18	TH	SW6010C
SPLP Mercury	< 0.0005	0.0005	mg/L	1	09/12/18	RS	SW7470A
SPLP Nickel	< 0.010	0.010	mg/L	1	09/12/18	TH	SW6010C
SPLP Lead	0.034	0.010	mg/L	1	09/12/18	EK	SW6010C
SPLP Antimony	< 0.005	0.005	mg/L	1	09/12/18	TH	SW6010C
SPLP Selenium	< 0.020	0.020	mg/L	1	09/12/18	TH	SW6010C
SPLP Thallium	< 0.005	0.005	mg/L	1	09/12/18	TH	SW6010C
SPLP Vanadium	< 0.010	0.010	mg/L	1	09/12/18	TH	SW6010C
SPLP Zinc	0.028	0.010	mg/L	1	09/12/18	TH	SW6010C
Thallium	< 3.2	3.2	mg/Kg	1	09/01/18	EK	SW6010C

Ver 2

Project ID: ROCKVILLE MGP
Client ID: HA-17 (1-2 FT)

Phoenix I.D.: CB22894

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
SPLP Metals Digestion	Completed				09/12/18	IQ/I	SW3010A
Vanadium	31.3	0.36	mg/Kg	1	09/01/18	EK	SW6010C
Zinc	278	7.1	mg/Kg	10	09/05/18	EK	SW6010C
Percent Solid	91		%		08/31/18	q	SW846-%Solid
Total Cyanide (SW9010C Distill.)	3.59	0.55	mg/Kg	1	09/04/18	EG	SW9012B
Soil Extraction SVOA PAH	Completed				08/31/18	JJ/CKV	SW3545A
Extraction of CT ETPH	Completed				09/04/18	RB/SV	SW3545A
Mercury Digestion	Completed				09/04/18	Q/I/Q	SW7471B
SPLP Digestion Mercury	Completed				09/12/18	Q/I/I	SW1312/SW7470A
SPLP Extraction for Metals	Completed				09/11/18	I	SW1312
Total Metals Digest	Completed				08/31/18	L/AG	SW3050B
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	350	270	mg/Kg	5	09/05/18	JRB	CTETPH 8015D
Identification	**		mg/Kg	5	09/05/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	62		%	5	09/05/18	JRB	50 - 150 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	360	250	ug/Kg	1	09/01/18	HM	SW8270D
Acenaphthene	ND	250	ug/Kg	1	09/01/18	HM	SW8270D
Acenaphthylene	2600	250	ug/Kg	1	09/01/18	HM	SW8270D
Anthracene	1800	250	ug/Kg	1	09/01/18	HM	SW8270D
Benz(a)anthracene	5600	250	ug/Kg	1	09/01/18	HM	SW8270D
Benzo(a)pyrene	6200	250	ug/Kg	1	09/01/18	HM	SW8270D
Benzo(b)fluoranthene	7400	1000	ug/Kg	5	09/05/18	HM	SW8270D
Benzo(ghi)perylene	1100	250	ug/Kg	1	09/01/18	HM	SW8270D
Benzo(k)fluoranthene	2900	250	ug/Kg	1	09/01/18	HM	SW8270D
Chrysene	6300	250	ug/Kg	1	09/01/18	HM	SW8270D
Dibenz(a,h)anthracene	490	250	ug/Kg	1	09/01/18	HM	SW8270D
Fluoranthene	6200	250	ug/Kg	1	09/01/18	HM	SW8270D
Fluorene	450	250	ug/Kg	1	09/01/18	HM	SW8270D
Indeno(1,2,3-cd)pyrene	1300	250	ug/Kg	1	09/01/18	HM	SW8270D
Naphthalene	580	250	ug/Kg	1	09/01/18	HM	SW8270D
Phenanthrene	5000	250	ug/Kg	1	09/01/18	HM	SW8270D
Pyrene	12000	1200	ug/Kg	5	09/05/18	HM	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	58		%	1	09/01/18	HM	30 - 130 %
% Nitrobenzene-d5	54		%	1	09/01/18	HM	30 - 130 %
% Terphenyl-d14	55		%	1	09/01/18	HM	30 - 130 %

Project ID: ROCKVILLE MGP
Client ID: HA-17 (1-2 FT)
Phoenix I.D.: CB22894

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

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:

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C14 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

Semi-Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

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

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
September 13, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

September 13, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		08/30/18	9:35
Location Code:	TIGHE-DAS	Received by:	SW	08/31/18	14:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	E-0755-44B				

Laboratory Data

SDG ID: GCB22894
Phoenix ID: CB22895

Project ID: ROCKVILLE MGP
Client ID: HA-16 (0.5-2.5 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.41	0.41	mg/Kg	1	09/01/18	EK	SW6010C
Arsenic	18.6	0.81	mg/Kg	1	09/01/18	EK	SW6010C
Barium	77.9	0.41	mg/Kg	1	09/01/18	EK	SW6010C
Beryllium	0.37	0.32	mg/Kg	1	09/01/18	EK	SW6010C
Cadmium	0.77	0.41	mg/Kg	1	09/01/18	EK	SW6010C
Chromium	15.6	0.41	mg/Kg	1	09/01/18	EK	SW6010C
Copper	42.7	0.8	mg/kg	1	09/01/18	EK	SW6010C
Mercury	1.09	0.16	mg/Kg	1	09/04/18	RS	SW7471B
Nickel	10.2	0.41	mg/Kg	1	09/01/18	EK	SW6010C
Lead	101	0.41	mg/Kg	1	09/01/18	EK	SW6010C
Antimony	< 4.1	4.1	mg/Kg	1	09/01/18	EK	SW6010C
Selenium	< 1.6	1.6	mg/Kg	1	09/01/18	EK	SW6010C
Thallium	< 3.7	3.7	mg/Kg	1	09/01/18	EK	SW6010C
Vanadium	27.3	0.41	mg/Kg	1	09/01/18	EK	SW6010C
Zinc	101	0.8	mg/Kg	1	09/01/18	EK	SW6010C
Percent Solid	81		%		08/31/18	q	SW846-%Solid
Total Cyanide (SW9010C Distill.)	56.7	1.23	mg/Kg	2	09/04/18	EG	SW9012B
Soil Extraction SVOA PAH	Completed				08/31/18	JJ/CKV	SW3545A
Extraction of CT ETPH	Completed				09/04/18	RB/SV	SW3545A
Mercury Digestion	Completed				09/04/18	Q/I/Q	SW7471B
Total Metals Digest	Completed				08/31/18	L/AG	SW3050B
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	1100	300	mg/Kg	5	09/05/18	JRB	CTETPH 8015D
Identification	**		mg/Kg	5	09/05/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	Diluted Out		%	5	09/05/18	JRB	50 - 150 %

Ver 2

Project ID: ROCKVILLE MGP
Client ID: HA-16 (0.5-2.5 FT)

Phoenix I.D.: CB22895

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Polynuclear Aromatic HC							
2-Methylnaphthalene	360	280	ug/Kg	1	09/01/18	HM	SW8270D
Acenaphthene	ND	280	ug/Kg	1	09/01/18	HM	SW8270D
Acenaphthylene	2900	280	ug/Kg	1	09/01/18	HM	SW8270D
Anthracene	2000	280	ug/Kg	1	09/01/18	HM	SW8270D
Benz(a)anthracene	13000	1000	ug/Kg	10	09/05/18	HM	SW8270D
Benzo(a)pyrene	18000	1000	ug/Kg	10	09/05/18	HM	SW8270D
Benzo(b)fluoranthene	22000	1000	ug/Kg	10	09/05/18	HM	SW8270D
Benzo(ghi)perylene	13000	1000	ug/Kg	10	09/05/18	HM	SW8270D
Benzo(k)fluoranthene	6400	280	ug/Kg	1	09/01/18	HM	SW8270D
Chrysene	15000	1000	ug/Kg	10	09/05/18	HM	SW8270D
Dibenz(a,h)anthracene	3300	280	ug/Kg	1	09/01/18	HM	SW8270D
Fluoranthene	17000	2800	ug/Kg	10	09/05/18	HM	SW8270D
Fluorene	390	280	ug/Kg	1	09/01/18	HM	SW8270D
Indeno(1,2,3-cd)pyrene	12000	1000	ug/Kg	10	09/05/18	HM	SW8270D
Naphthalene	630	280	ug/Kg	1	09/01/18	HM	SW8270D
Phenanthrene	4700	280	ug/Kg	1	09/01/18	HM	SW8270D
Pyrene	26000	2800	ug/Kg	10	09/05/18	HM	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	62		%	1	09/01/18	HM	30 - 130 %
% Nitrobenzene-d5	58		%	1	09/01/18	HM	30 - 130 %
% Terphenyl-d14	51		%	1	09/01/18	HM	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:

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

Semi-Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

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

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Phyllis Shiller, Laboratory Director
September 13, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

September 13, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		08/30/18	11:00
Location Code:	TIGHE-DAS	Received by:	SW	08/31/18	14:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	E-0755-44B				

Laboratory Data

SDG ID: GCB22894
Phoenix ID: CB22896

Project ID: ROCKVILLE MGP
Client ID: HA-12 (2-4 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.44	0.44	mg/Kg	1	09/01/18	EK	SW6010C
Arsenic	6.16	0.88	mg/Kg	1	09/01/18	EK	SW6010C
Barium	74.6	0.44	mg/Kg	1	09/01/18	EK	SW6010C
Beryllium	0.53	0.35	mg/Kg	1	09/01/18	EK	SW6010C
Cadmium	0.56	0.44	mg/Kg	1	09/01/18	EK	SW6010C
Chromium	33.0	0.44	mg/Kg	1	09/01/18	EK	SW6010C
Copper	37.2	0.9	mg/kg	1	09/01/18	EK	SW6010C
Mercury	0.33	0.16	mg/Kg	1	09/04/18	RS	SW7471B
Nickel	8.79	0.44	mg/Kg	1	09/01/18	EK	SW6010C
Lead	123	0.44	mg/Kg	1	09/01/18	EK	SW6010C
Antimony	< 4.4	4.4	mg/Kg	1	09/01/18	EK	SW6010C
Selenium	< 1.8	1.8	mg/Kg	1	09/01/18	EK	SW6010C
Thallium	< 4.0	4.0	mg/Kg	1	09/01/18	EK	SW6010C
Vanadium	29.9	0.44	mg/Kg	1	09/01/18	EK	SW6010C
Zinc	89.5	0.9	mg/Kg	1	09/01/18	EK	SW6010C
Percent Solid	78		%		08/31/18	q	SW846-%Solid
Total Cyanide (SW9010C Distill.)	0.58	0.58	mg/Kg	1	09/04/18	EG	SW9012B
Soil Extraction SVOA PAH	Completed				08/31/18	JJ/CKV	SW3545A
Extraction of CT ETPH	Completed				09/04/18	RB/SV	SW3545A
Mercury Digestion	Completed				09/04/18	Q/I/Q	SW7471B
Total Metals Digest	Completed				08/31/18	L/AG	SW3050B
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	63	mg/Kg	1	09/05/18	JRB	CTETPH 8015D
Identification	ND		mg/Kg	1	09/05/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	70		%	1	09/05/18	JRB	50 - 150 %

Ver 2

Project ID: ROCKVILLE MGP
Client ID: HA-12 (2-4 FT)

Phoenix I.D.: CB22896

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Polynuclear Aromatic HC							
2-Methylnaphthalene	ND	290	ug/Kg	1	09/04/18	HM	SW8270D
Acenaphthene	ND	290	ug/Kg	1	09/04/18	HM	SW8270D
Acenaphthylene	610	290	ug/Kg	1	09/04/18	HM	SW8270D
Anthracene	ND	290	ug/Kg	1	09/04/18	HM	SW8270D
Benz(a)anthracene	1600	290	ug/Kg	1	09/04/18	HM	SW8270D
Benzo(a)pyrene	1900	290	ug/Kg	1	09/04/18	HM	SW8270D
Benzo(b)fluoranthene	1700	290	ug/Kg	1	09/04/18	HM	SW8270D
Benzo(ghi)perylene	1200	290	ug/Kg	1	09/04/18	HM	SW8270D
Benzo(k)fluoranthene	1500	290	ug/Kg	1	09/04/18	HM	SW8270D
Chrysene	2000	290	ug/Kg	1	09/04/18	HM	SW8270D
Dibenz(a,h)anthracene	330	290	ug/Kg	1	09/04/18	HM	SW8270D
Fluoranthene	2600	290	ug/Kg	1	09/04/18	HM	SW8270D
Fluorene	ND	290	ug/Kg	1	09/04/18	HM	SW8270D
Indeno(1,2,3-cd)pyrene	1400	290	ug/Kg	1	09/04/18	HM	SW8270D
Naphthalene	ND	290	ug/Kg	1	09/04/18	HM	SW8270D
Phenanthrene	1200	290	ug/Kg	1	09/04/18	HM	SW8270D
Pyrene	2700	290	ug/Kg	1	09/04/18	HM	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	55		%	1	09/04/18	HM	30 - 130 %
% Nitrobenzene-d5	46		%	1	09/04/18	HM	30 - 130 %
% Terphenyl-d14	55		%	1	09/04/18	HM	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.

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Phyllis Shiller, Laboratory Director
September 13, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

September 13, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		08/30/18	9:35
Location Code:	TIGHE-DAS	Received by:	SW	08/31/18	14:00
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	E-0755-44B				

Laboratory Data

SDG ID: GCB22894
Phoenix ID: CB22897

Project ID: ROCKVILLE MGP
Client ID: HA-DUP

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.38	0.38	mg/Kg	1	09/01/18	EK	SW6010C
Arsenic	18.6	0.77	mg/Kg	1	09/01/18	EK	SW6010C
Barium	83.4	0.38	mg/Kg	1	09/01/18	EK	SW6010C
Beryllium	0.41	0.31	mg/Kg	1	09/01/18	EK	SW6010C
Cadmium	0.78	0.38	mg/Kg	1	09/01/18	EK	SW6010C
Chromium	15.7	0.38	mg/Kg	1	09/01/18	EK	SW6010C
Copper	44.0	0.8	mg/kg	1	09/01/18	EK	SW6010C
Mercury	0.63	0.13	mg/Kg	1	09/04/18	RS	SW7471B
Nickel	10.9	0.38	mg/Kg	1	09/01/18	EK	SW6010C
Lead	110	0.38	mg/Kg	1	09/01/18	EK	SW6010C
Antimony	< 3.8	3.8	mg/Kg	1	09/01/18	EK	SW6010C
Selenium	< 1.5	1.5	mg/Kg	1	09/01/18	EK	SW6010C
Thallium	< 3.4	3.4	mg/Kg	1	09/01/18	EK	SW6010C
Vanadium	29.3	0.38	mg/Kg	1	09/01/18	EK	SW6010C
Zinc	107	0.8	mg/Kg	1	09/01/18	EK	SW6010C
Percent Solid	92		%		08/31/18	q	SW846-%Solid
Total Cyanide (SW9010C Distill.)	124	2.72	mg/Kg	5	09/04/18	EG	SW9012B
Soil Extraction SVOA PAH	Completed				08/31/18	JJ/CKV	SW3545A
Extraction of CT ETPH	Completed				09/04/18	RB/SV	SW3545A
Mercury Digestion	Completed				09/04/18	Q/I/Q	SW7471B
Total Metals Digest	Completed				08/31/18	L/AG	SW3050B
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	1300	270	mg/Kg	5	09/05/18	JRB	CTETPH 8015D
Identification	**		mg/Kg	5	09/05/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	Diluted Out		%	5	09/05/18	JRB	50 - 150 %

Ver 2

Project ID: ROCKVILLE MGP
Client ID: HA-DUP

Phoenix I.D.: CB22897

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Polynuclear Aromatic HC							
2-Methylnaphthalene	310	250	ug/Kg	1	09/01/18	HM	SW8270D
Acenaphthene	560	250	ug/Kg	1	09/01/18	HM	SW8270D
Acenaphthylene	3000	250	ug/Kg	1	09/01/18	HM	SW8270D
Anthracene	2900	250	ug/Kg	1	09/01/18	HM	SW8270D
Benz(a)anthracene	18000	1000	ug/Kg	10	09/04/18	HM	SW8270D
Benzo(a)pyrene	23000	1000	ug/Kg	10	09/04/18	HM	SW8270D
Benzo(b)fluoranthene	21000	1000	ug/Kg	10	09/04/18	HM	SW8270D
Benzo(ghi)perylene	19000	1000	ug/Kg	10	09/04/18	HM	SW8270D
Benzo(k)fluoranthene	17000	1000	ug/Kg	10	09/04/18	HM	SW8270D
Chrysene	22000	1000	ug/Kg	10	09/04/18	HM	SW8270D
Dibenz(a,h)anthracene	3800	250	ug/Kg	1	09/01/18	HM	SW8270D
Fluoranthene	28000	2500	ug/Kg	10	09/04/18	HM	SW8270D
Fluorene	730	250	ug/Kg	1	09/01/18	HM	SW8270D
Indeno(1,2,3-cd)pyrene	18000	1000	ug/Kg	10	09/04/18	HM	SW8270D
Naphthalene	590	250	ug/Kg	1	09/01/18	HM	SW8270D
Phenanthrene	9700	2500	ug/Kg	10	09/04/18	HM	SW8270D
Pyrene	38000	2500	ug/Kg	10	09/04/18	HM	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	60		%	1	09/01/18	HM	30 - 130 %
% Nitrobenzene-d5	56		%	1	09/01/18	HM	30 - 130 %
% Terphenyl-d14	42		%	1	09/01/18	HM	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:

Semi-Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

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

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Phyllis Shiller, Laboratory Director
September 13, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

QA/QC Report

September 13, 2018

QA/QC Data

SDG I.D.: GCB22894

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 447036 (mg/L), QC Sample No: CB22434 (CB22894)														
ICP Metals - SPLP Extraction														
Antimony	BRL	0.005	0.011	0.009	NC	103			103			75 - 125	20	
Arsenic	BRL	0.004	0.006	0.005	NC	99.3			102			75 - 125	20	
Barium	BRL	0.010	0.021	0.018	NC	106			108			75 - 125	20	
Beryllium	BRL	0.001	<0.001	<0.001	NC	106			108			75 - 125	20	
Cadmium	BRL	0.005	<0.005	<0.005	NC	101			103			75 - 125	20	
Chromium	BRL	0.010	0.002	0.002	NC	99.5			102			75 - 125	20	
Copper	BRL	0.010	0.026	0.025	NC	103			105			75 - 125	20	
Lead	BRL	0.010	0.004	0.003	NC	100			102			75 - 125	20	
Nickel	BRL	0.010	0.004	0.004	NC	99.5			102			75 - 125	20	
Selenium	BRL	0.020	<0.020	<0.020	NC	100			103			75 - 125	20	
Silver	BRL	0.010	<0.010	<0.010	NC	102			103			75 - 125	20	
Thallium	BRL	0.005	<0.005	<0.005	NC	98.6			99.3			75 - 125	20	
Vanadium	BRL	0.010	0.006	0.007	NC	102			103			75 - 125	20	
Zinc	BRL	0.010	0.041	0.026	NC	101			103			75 - 125	20	
QA/QC Batch 445877 (mg/kg), QC Sample No: CB22819 (CB22894, CB22895, CB22896, CB22897)														
Mercury - Soil	BRL	0.02	<0.03	<0.03	NC	95.6	107	11.3	108			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 445742 (mg/kg), QC Sample No: CB22865 (CB22894, CB22895, CB22896, CB22897)														
ICP Metals - Soil														
Antimony	BRL	3.2	<4.1	<4.0	NC	115			89.6			75 - 125	30	
Arsenic	BRL	0.63	4.27	4.19	1.90	98.4			93.1			75 - 125	30	
Barium	BRL	0.32	328	323	1.50	105			98.9			75 - 125	30	
Beryllium	BRL	0.25	2.29	2.27	0.90	102			99.5			75 - 125	30	
Cadmium	BRL	0.32	<0.41	<0.40	NC	97.7			95.7			75 - 125	30	
Chromium	BRL	0.32	43.3	41.6	4.00	108			100			75 - 125	30	
Copper	BRL	0.63	10.5	10.8	2.80	108			111			75 - 125	30	
Lead	BRL	0.32	5.72	5.99	4.60	102			99.9			75 - 125	30	
Nickel	BRL	0.32	21.8	21.1	3.30	103			97.3			75 - 125	30	
Selenium	BRL	1.3	<1.6	<1.6	NC	81.5			74.2			75 - 125	30	m
Silver	BRL	0.32	<0.41	<0.40	NC	102			99.9			75 - 125	30	
Thallium	BRL	2.8	<3.7	<3.6	NC	101			99.4			75 - 125	30	
Vanadium	BRL	0.32	53.1	51.7	2.70	114			102			75 - 125	30	
Zinc	BRL	0.63	52.7	50.9	3.50	98.9			96.1			75 - 125	30	
QA/QC Batch 447033 (mg/L), QC Sample No: CB28295 (CB22894)														
Mercury - Water	BRL	0.0002	<0.0002	<0.0002	NC	121			79.6			80 - 120	20	l
Comment:														
Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 70-130%. MS acceptance range is 75-125%.														

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.

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

QA/QC Report

September 13, 2018

QA/QC Data

SDG I.D.: GCB22894

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 445776 (mg/Kg), QC Sample No: CB22894 50X (CB22894, CB22895, CB22896, CB22897)													
Total Cyanide (SW9010C Distill.)	BRL	0.50	3.59	3.60	0.30	108			96.8			80 - 120	30
Comment:													
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils													

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

September 13, 2018

QA/QC Data

SDG I.D.: GCB22894

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 445927 (mg/Kg), QC Sample No: CB22818 (CB22894, CB22895, CB22896, CB22897)										
TPH by GC (Extractable Products) - Soil										
Ext. Petroleum H.C. (C9-C36)	ND	50	68	62	9.2	65	66	1.5	60 - 120	30
% n-Pentacosane	70	%	76	67	12.6	77	72	6.7	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 445712 (ug/kg), QC Sample No: CB23157 (CB22894, CB22895, CB22896, CB22897)										
Semivolatiles - Soil										
2-Methylnaphthalene	ND	230	57	64	11.6	63	60	4.9	30 - 130	30
Acenaphthene	ND	230	65	73	11.6	70	68	2.9	30 - 130	30
Acenaphthylene	ND	130	62	69	10.7	62	60	3.3	30 - 130	30
Anthracene	ND	230	68	75	9.8	59	60	1.7	30 - 130	30
Benz(a)anthracene	ND	230	67	75	11.3	73	66	10.1	30 - 130	30
Benzo(a)pyrene	ND	130	66	74	11.4	67	66	1.5	30 - 130	30
Benzo(b)fluoranthene	ND	160	68	77	12.4	82	83	1.2	30 - 130	30
Benzo(ghi)perylene	ND	230	67	76	12.6	41	35	15.8	30 - 130	30
Benzo(k)fluoranthene	ND	230	70	78	10.8	78	83	6.2	30 - 130	30
Chrysene	ND	230	69	78	12.2	69	65	6.0	30 - 130	30
Dibenz(a,h)anthracene	ND	130	75	84	11.3	52	49	5.9	30 - 130	30
Fluoranthene	ND	230	67	74	9.9	57	56	1.8	30 - 130	30
Fluorene	ND	230	67	75	11.3	71	69	2.9	30 - 130	30
Indeno(1,2,3-cd)pyrene	ND	230	68	76	11.1	47	40	16.1	30 - 130	30
Naphthalene	ND	230	51	59	14.5	59	55	7.0	30 - 130	30
Phenanthrene	ND	130	66	74	11.4	65	61	6.3	30 - 130	30
Pyrene	ND	230	68	75	9.8	61	61	0.0	30 - 130	30
% 2-Fluorobiphenyl	62	%	57	66	14.6	63	60	4.9	30 - 130	30
% Nitrobenzene-d5	56	%	49	57	15.1	59	48	20.6	30 - 130	30
% Terphenyl-d14	63	%	58	63	8.3	56	57	1.8	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
September 13, 2018

Thursday, September 13, 2018

Criteria: CT: GBM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCB22894 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CB22894	$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	6200	250	1000	1000	ug/Kg
CB22894	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	1300	250	1000	1000	ug/Kg
CB22894	$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	5600	250	1000	1000	ug/Kg
CB22894	$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	6200	250	1000	1000	ug/Kg
CB22894	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	7400	1000	1000	1000	ug/Kg
CB22894	$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	6300	250	1000	1000	ug/Kg
CB22894	$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	1100	250	1000	1000	ug/Kg
CB22894	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	1300	250	1000	1000	ug/Kg
CB22894	$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	7400	1000	1000	1000	ug/Kg
CB22894	$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	2900	250	1000	1000	ug/Kg
CB22894	$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	6200	250	1000	1000	ug/Kg
CB22894	$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	5600	250	1000	1000	ug/Kg
CB22895	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC I/C (mg/kg) / APS Organics	12000	1000	7800	7800	ug/Kg
CB22895	$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC I/C (mg/kg) / APS Organics	3300	280	1000	1000	ug/Kg
CB22895	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	22000	1000	7800	7800	ug/Kg
CB22895	$8100SMR	Benz(a)anthracene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	13000	1000	7800	7800	ug/Kg
CB22895	$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	18000	1000	1000	1000	ug/Kg
CB22895	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	12000	1000	1000	1000	ug/Kg
CB22895	$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC RES (mg/kg) / APS Organics	3300	280	1000	1000	ug/Kg
CB22895	$8100SMR	Benzo(ghi)perylene	CT / RSR DEC RES (mg/kg) / APS Organics	13000	1000	8400	8400	ug/Kg
CB22895	$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	18000	1000	1000	1000	ug/Kg
CB22895	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	22000	1000	1000	1000	ug/Kg
CB22895	$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	13000	1000	1000	1000	ug/Kg
CB22895	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	12000	1000	1000	1000	ug/Kg
CB22895	$8100SMR	Dibenz(a,h)anthracene	CT / RSR GB (mg/kg) / APS Organics	3300	280	1000	1000	ug/Kg
CB22895	$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	15000	1000	1000	1000	ug/Kg
CB22895	$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	13000	1000	1000	1000	ug/Kg
CB22895	$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	22000	1000	1000	1000	ug/Kg
CB22895	$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	18000	1000	1000	1000	ug/Kg
CB22895	$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	6400	280	1000	1000	ug/Kg
CB22895	$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	13000	1000	1000	1000	ug/Kg
CB22895	$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR DEC RES (mg/kg) / Pest/PCB/TPH	1100	300	500	500	mg/Kg
CB22895	AS-SM	Arsenic	CT / RSR DEC I/C (mg/kg) / Inorganics	18.6	0.81	10	10	mg/Kg
CB22895	AS-SM	Arsenic	CT / RSR DEC RES (mg/kg) / Inorganics	18.6	0.81	10	10	mg/Kg
CB22896	$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	1900	290	1000	1000	ug/Kg
CB22896	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	1400	290	1000	1000	ug/Kg
CB22896	$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1600	290	1000	1000	ug/Kg
CB22896	$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1900	290	1000	1000	ug/Kg
CB22896	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1700	290	1000	1000	ug/Kg
CB22896	$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	2000	290	1000	1000	ug/Kg

Thursday, September 13, 2018

Criteria: CT: GBM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCB22894 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CB22896	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	1400	290	1000	1000	ug/Kg
CB22896	$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	1200	290	1000	1000	ug/Kg
CB22896	$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	1700	290	1000	1000	ug/Kg
CB22896	$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	1500	290	1000	1000	ug/Kg
CB22896	$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	1900	290	1000	1000	ug/Kg
CB22896	$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	1600	290	1000	1000	ug/Kg
CB22897	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC I/C (mg/kg) / APS Organics	18000	1000	7800	7800	ug/Kg
CB22897	$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC I/C (mg/kg) / APS Organics	3800	250	1000	1000	ug/Kg
CB22897	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	21000	1000	7800	7800	ug/Kg
CB22897	$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	23000	1000	1000	1000	ug/Kg
CB22897	$8100SMR	Benz(a)anthracene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	18000	1000	7800	7800	ug/Kg
CB22897	$8100SMR	Benzo(ghi)perylene	CT / RSR DEC RES (mg/kg) / APS Organics	19000	1000	8400	8400	ug/Kg
CB22897	$8100SMR	Dibenz(a,h)anthracene	CT / RSR DEC RES (mg/kg) / APS Organics	3800	250	1000	1000	ug/Kg
CB22897	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	18000	1000	1000	1000	ug/Kg
CB22897	$8100SMR	Benzo(k)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	17000	1000	8400	8400	ug/Kg
CB22897	$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	21000	1000	1000	1000	ug/Kg
CB22897	$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	23000	1000	1000	1000	ug/Kg
CB22897	$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	18000	1000	1000	1000	ug/Kg
CB22897	$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	19000	1000	1000	1000	ug/Kg
CB22897	$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	22000	1000	1000	1000	ug/Kg
CB22897	$8100SMR	Dibenz(a,h)anthracene	CT / RSR GB (mg/kg) / APS Organics	3800	250	1000	1000	ug/Kg
CB22897	$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	18000	1000	1000	1000	ug/Kg
CB22897	$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	21000	1000	1000	1000	ug/Kg
CB22897	$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	17000	1000	1000	1000	ug/Kg
CB22897	$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	18000	1000	1000	1000	ug/Kg
CB22897	$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	23000	1000	1000	1000	ug/Kg
CB22897	$ETPH_SMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR DEC RES (mg/kg) / Pest/PCB/TPH	1300	270	500	500	mg/Kg
CB22897	AS-SM	Arsenic	CT / RSR DEC I/C (mg/kg) / Inorganics	18.6	0.77	10	10	mg/Kg
CB22897	AS-SM	Arsenic	CT / RSR DEC RES (mg/kg) / Inorganics	18.6	0.77	10	10	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 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.

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

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

Project Location: ROCKVILLE MGP ***Project Number:***

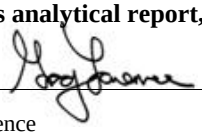
Laboratory Sample ID(s): CB22894-CB22897 ***Sampling Date(s):*** 8/30/2018

List RCP Methods Used (e.g., 8260, 8270, et cetera) 1311/1312, 6010, 7470/7471, 8270, ETPH, 9010/9012

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	***VPH and EPH methods only:*** **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?** **b) Were these reporting limits met?**	☑ Yes ☐ No ☑ 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 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:** Thursday, September 13, 2018

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

September 13, 2018

SDG I.D.: GCB22894

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.

Cyanide Narration

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

Instrument:

LACHAT 09/04/18-1 Eric Geyer, Chemist 09/04/18

CB22894, CB22895, CB22896, CB22897

The samples were distilled in accordance with the method.
The initial calibration met criteria.

The calibration check standards (ICV,CCV) were within 15% of true value and were analyzed at a frequencey of one per ten samples.
The continuing calibration blanks (ICB,CCB) had concentrations less than the reporting level.

The method blank, laboratory control sample (LCS), and matrix spike were distilled with the samples.

QC (Site Specific):

Batch 445776 (CB22894)

CB22894, CB22895, CB22896, CB22897

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils

ETPH Narration

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

Instrument:

AU-FID1 09/04/18-1 Jeff Bucko, Chemist 09/04/18

CB22896

The initial calibration (ETPH723I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-FID1 09/05/18-1 Jeff Bucko, Chemist 09/05/18

CB22895, CB22897

The initial calibration (ETPH723I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-FID11 09/05/18-1 Jeff Bucko, Chemist 09/05/18

CB22894

The initial calibration (ETPH728I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

Environmental Laboratories, Inc.
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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

September 13, 2018

SDG I.D.: GCB22894

ETPH Narration

QC (Batch Specific):

Batch 445927 (CB22818)

CB22894, CB22895, CB22896, CB22897

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 09/04/18 08:15 Rick Schweitzer, Chemist 09/04/18

CB22894, CB22895, CB22896, CB22897

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.

MERLIN 09/12/18 07:54 Rick Schweitzer, Chemist 09/12/18

CB22894

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 445877 (CB22819)

CB22894, CB22895, CB22896, CB22897

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

Batch 447033 (CB28295)

CB22894

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Certification Report

September 13, 2018

SDG I.D.: GCB22894

Mercury Narration

All LCS recoveries were within 80 - 120 with the following exceptions: Mercury(121%)
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? Yes.

Instrument:

ARCOS 09/01/18 09:23 Emily Kolominskaya, Chemist 09/01/18

CB22894, CB22895, CB22896, CB22897

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.

ARCOS 09/05/18 08:38 Emily Kolominskaya, Chemist 09/05/18

CB22894

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.

BLUE 09/12/18 10:42 Emily Kolominskaya, Tina Hall, Chemist 09/12/18

CB22894

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.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 445742 (CB22865)

CB22894, CB22895, CB22896, CB22897

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

Batch 447036 (CB22434)

CB22894

All LCS recoveries were within 75 - 125 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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

September 13, 2018

SDG I.D.: GCB22894

SVOA Narration

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

Instrument:

CHEM05 09/01/18-1 Keith Aloisa, Chemist 09/01/18

CB22894

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 Verification (CHEM05/SPLIT_0827A):
94% 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 (CHEM05/0901_02-SPLIT_0827A):
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.

CHEM05 09/05/18-1 Harry Mullin, Chemist 09/05/18

CB22894, CB22895

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 Verification (CHEM05/BN_SPLITA21a):
98% 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 (CHEM05/0905_06-BN_SPLITA21a):
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.

CHEM06 09/04/18-1 Harry Mullin, Chemist 09/04/18

CB22896, CB22897

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.

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Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

September 13, 2018

SDG I.D.: GCB22894

SVOA Narration

Initial Calibration Verification (CHEM06/BN_0827):
93% 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 (CHEM06/0904_02-BN_0827):
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.

CHEM28 09/01/18-1 Keith Aloisa, Chemist 09/01/18

CB22895, CB22897

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 Verification (CHEM28/bnSPLIT0821TEST):
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 (CHEM28/0901_03A-bnSPLIT0821TEST):
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 445712 (CB23157)

CB22894, CB22895, CB22896, CB22897

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 2.6C with cooling initiated.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler: Yes [X] No [ ]
Coolant: IPK [X] ICE [ ] No [ ]
Temp 2.0 °C Pg 1 of 1

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

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

Contact Options:
[ ] Fax:
[ ] Phone:
[X] Email: LEwilley@tighebond.com

Customer: Tighe + Bond
Address: 213 Court St Suite 1100
Middletown CT

Project: Rockville MGP
Report to: Lynn Willey
Invoice to: Tighe + Bond

Project P.O: E-0755-443

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/30/14

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

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	PAH	ETPH	RSR metals	Cyanide	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container (4) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle
22894	HA-17 (1-2 FT)	S	9/30/14	9:20	X	X	X	X		1								
22895	HA-16 (0.5-2.5FT)			9:35	X	X	X	X		1								
22896	HA-12 (2-4 FT)			11:00	X	X	X	X		1								
22897	HA-DUP			9:35	X	X	X	X		1								

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9/31/14	1307
	[signature]	93118	1400

Comments, Special Requirements or Regulations:
DAS Pricing
Quote: TI0125073A

Turnaround:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[X] Standard
[ ] Other
* SURCHARGE APPLIES

RI
[ ] Direct Exposure (Residential)
[ ] GW
[ ] Other

CT
[X] RCP Cert
[ ] GW Protection
[ ] SW Protection
[ ] GA Mobility
[X] GB Mobility
[X] Residential DEC
[X] I/C DEC
[ ] Other

MA
[ ] MCP Certification
[ ] GW-1
[ ] GW-2
[ ] GW-3
[ ] S-1
[ ] S-2
[ ] S-3
[ ] MWRA eSMART
[ ] Other

State where samples were collected: CT

Data Format
[X] Excel
[X] PDF
[ ] GIS/Key
[ ] EQuIS
[X] Other Geotech

Data Package
[ ] Tier II Checklist
[ ] Full Data Package*
[X] Phoenix Std Report
[ ] Other
* SURCHARGE APPLIES

The Connecticut Light and Power Company
d/b/a Eversource Energy
Docket No. 26-05-10
Date Issued September 29, 2026
RSR-032 Attachment 17
Page 720 of 1282

Client Services

From: Benjamin P. Caswell <BCaswell@tighebond.com>
Sent: Tuesday, September 11, 2018 8:45 AM
To: Client Services
Subject: SPLP Metals GCB22894

Good morning Sarah,

Can you please run GCB22894, HA-17 (1-2ft), for SPLP RSR metals?

Thank you,
Ben

Benjamin Caswell | Environmental Scientist
Tighe&Bond | 213 Court St., Suite 1100 | Middletown, CT 06457 | 860.852.5220 | 401.787.0905 (cell)
www.tighebond.com | Follow us on: Twitter Facebook LinkedIn



PHOENIX
Environmental Laboratories, Inc.

Thursday, October 04, 2018

Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Project ID: ROCKVILLE MGP
Sample ID#s: CB62410

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 have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

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

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

Analysis Report

October 04, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/01/18	10:50
Location Code:	TIGHE-DAS	Received by:	B	10/01/18	18:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCB62410
Phoenix ID: CB62410

Project ID: ROCKVILLE MGP
Client ID: SB-63 (35-37FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	88		%		10/01/18	AK	SW846-%Solid
Soil Extraction SVOA PAH	Completed				10/01/18	JJ/CKV	SW3545A
Extraction of CT ETPH	Completed				10/01/18	BB/VCK	SW3545A
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	56	mg/Kg	1	10/02/18	JRB	CTETPH 8015D
Identification	ND		mg/Kg	1	10/02/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	72		%	1	10/02/18	JRB	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	4.1	ug/Kg	1	10/02/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
1,1-Dichloroethane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
1,1-Dichloroethene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
1,1-Dichloropropene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
1,2-Dibromoethane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
1,2-Dichloroethane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
1,2-Dichloropropane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-63 (35-37FT)

Phoenix I.D.: CB62410

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
1,3-Dichloropropane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
2,2-Dichloropropane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
2-Chlorotoluene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
2-Hexanone	ND	34	ug/Kg	1	10/02/18	JLI	SW8260C
2-Isopropyltoluene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
4-Chlorotoluene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	34	ug/Kg	1	10/02/18	JLI	SW8260C
Acetone	ND	340	ug/Kg	1	10/02/18	JLI	SW8260C
Acrylonitrile	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Benzene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Bromobenzene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Bromochloromethane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Bromodichloromethane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Bromoform	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Bromomethane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Carbon Disulfide	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Carbon tetrachloride	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Chlorobenzene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Chloroethane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Chloroform	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Chloromethane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Dibromochloromethane	ND	4.1	ug/Kg	1	10/02/18	JLI	SW8260C
Dibromomethane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Dichlorodifluoromethane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Ethylbenzene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Hexachlorobutadiene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Isopropylbenzene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
m&p-Xylene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	41	ug/Kg	1	10/02/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	14	ug/Kg	1	10/02/18	JLI	SW8260C
Methylene chloride	ND	14	ug/Kg	1	10/02/18	JLI	SW8260C
Naphthalene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
n-Butylbenzene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
n-Propylbenzene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
o-Xylene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
p-Isopropyltoluene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
sec-Butylbenzene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Styrene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
tert-Butylbenzene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Tetrachloroethene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	14	ug/Kg	1	10/02/18	JLI	SW8260C
Toluene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Total Xylenes	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SB-63 (35-37FT)

Phoenix I.D.: CB62410

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,4-dichloro-2-butene	ND	14	ug/Kg	1	10/02/18	JLI	SW8260C
Trichloroethene	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Trichlorofluoromethane	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	14	ug/Kg	1	10/02/18	JLI	SW8260C
Vinyl chloride	ND	6.8	ug/Kg	1	10/02/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/02/18	JLI	70 - 130 %
% Bromofluorobenzene	101		%	1	10/02/18	JLI	70 - 130 %
% Dibromofluoromethane	99		%	1	10/02/18	JLI	70 - 130 %
% Toluene-d8	101		%	1	10/02/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	ND	260	ug/Kg	1	10/02/18	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	10/02/18	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	10/02/18	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	10/02/18	WB	SW8270D
Benz(a)anthracene	ND	260	ug/Kg	1	10/02/18	WB	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	10/02/18	WB	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	10/02/18	WB	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	10/02/18	WB	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	10/02/18	WB	SW8270D
Chrysene	ND	260	ug/Kg	1	10/02/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	10/02/18	WB	SW8270D
Fluoranthene	ND	260	ug/Kg	1	10/02/18	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	10/02/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	10/02/18	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	10/02/18	WB	SW8270D
Phenanthrene	ND	260	ug/Kg	1	10/02/18	WB	SW8270D
Pyrene	ND	260	ug/Kg	1	10/02/18	WB	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	65		%	1	10/02/18	WB	30 - 130 %
% Nitrobenzene-d5	58		%	1	10/02/18	WB	30 - 130 %
% Terphenyl-d14	61		%	1	10/02/18	WB	30 - 130 %
Field Extraction	Completed				10/01/18		SW5035A

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 there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
October 04, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Ver 1

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

QA/QC Report

October 04, 2018

QA/QC Data

SDG I.D.: GCB62410

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 449730 (ug/kg), QC Sample No: CB61557 (CB62410)										
Semivolatiles - Soil										
2-Methylnaphthalene	ND	230	66	67	1.5	68	64	6.1	30 - 130	30
Acenaphthene	ND	230	75	78	3.9	71	67	5.8	30 - 130	30
Acenaphthylene	ND	130	69	72	4.3	66	63	4.7	30 - 130	30
Anthracene	ND	230	77	78	1.3	74	70	5.6	30 - 130	30
Benz(a)anthracene	ND	230	74	75	1.3	73	69	5.6	30 - 130	30
Benzo(a)pyrene	ND	130	75	76	1.3	72	68	5.7	30 - 130	30
Benzo(b)fluoranthene	ND	160	77	77	0.0	75	70	6.9	30 - 130	30
Benzo(ghi)perylene	ND	230	75	75	0.0	52	46	12.2	30 - 130	30
Benzo(k)fluoranthene	ND	230	80	80	0.0	72	71	1.4	30 - 130	30
Chrysene	ND	230	77	76	1.3	75	72	4.1	30 - 130	30
Dibenz(a,h)anthracene	ND	130	84	83	1.2	61	54	12.2	30 - 130	30
Fluoranthene	ND	230	78	78	0.0	76	67	12.6	30 - 130	30
Fluorene	ND	230	76	78	2.6	75	69	8.3	30 - 130	30
Indeno(1,2,3-cd)pyrene	ND	230	76	77	1.3	56	48	15.4	30 - 130	30
Naphthalene	ND	230	65	67	3.0	67	64	4.6	30 - 130	30
Phenanthrene	ND	130	74	77	4.0	73	68	7.1	30 - 130	30
Pyrene	ND	230	79	78	1.3	78	71	9.4	30 - 130	30
% 2-Fluorobiphenyl	60	%	65	68	4.5	60	58	3.4	30 - 130	30
% Nitrobenzene-d5	56	%	67	69	2.9	70	67	4.4	30 - 130	30
% Terphenyl-d14	62	%	66	65	1.5	60	57	5.1	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%)										
QA/QC Batch 449736 (mg/Kg), QC Sample No: CB61602 (CB62410)										
TPH by GC (Extractable Products) - Soil										
Ext. Petroleum H.C. (C9-C36)	ND	50	87	83	4.7	110	119	7.9	60 - 120	30
% n-Pentacosane	76	%	69	67	2.9	77	84	8.7	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 449891 (ug/kg), QC Sample No: CB61701 (CB62410)										
Volatiles - Soil										
1,1,1,2-Tetrachloroethane	ND	5.0	97	93	4.2	92	94	2.2	70 - 130	30
1,1,1-Trichloroethane	ND	5.0	102	98	4.0	99	98	1.0	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	3.0	92	90	2.2	94	99	5.2	70 - 130	30
1,1,2-Trichloroethane	ND	5.0	91	89	2.2	92	96	4.3	70 - 130	30
1,1-Dichloroethane	ND	5.0	96	93	3.2	94	94	0.0	70 - 130	30
1,1-Dichloroethene	ND	5.0	87	83	4.7	80	81	1.2	70 - 130	30
1,1-Dichloropropene	ND	5.0	103	98	5.0	100	101	1.0	70 - 130	30
1,2,3-Trichlorobenzene	ND	5.0	93	89	4.4	86	87	1.2	70 - 130	30

QA/QC Data

SDG I.D.: GCB62410

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,2,3-Trichloropropane	ND	5.0	84	84	0.0	87	92	5.6	70 - 130	30	
1,2,4-Trichlorobenzene	ND	5.0	97	93	4.2	85	85	0.0	70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	96	90	6.5	90	90	0.0	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	91	94	3.2	92	100	8.3	70 - 130	30	
1,2-Dibromoethane	ND	5.0	91	92	1.1	95	98	3.1	70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	92	87	5.6	86	87	1.2	70 - 130	30	
1,2-Dichloroethane	ND	5.0	95	92	3.2	96	99	3.1	70 - 130	30	
1,2-Dichloropropane	ND	5.0	97	92	5.3	96	98	2.1	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	95	90	5.4	91	91	0.0	70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	93	88	5.5	86	86	0.0	70 - 130	30	
1,3-Dichloropropane	ND	5.0	90	87	3.4	91	93	2.2	70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	92	86	6.7	84	84	0.0	70 - 130	30	
2,2-Dichloropropane	ND	5.0	112	108	3.6	103	105	1.9	70 - 130	30	
2-Chlorotoluene	ND	5.0	93	88	5.5	89	90	1.1	70 - 130	30	
2-Hexanone	ND	25	83	84	1.2	89	97	8.6	70 - 130	30	
2-Isopropyltoluene	ND	5.0	108	102	5.7	103	104	1.0	70 - 130	30	
4-Chlorotoluene	ND	5.0	93	88	5.5	87	87	0.0	70 - 130	30	
4-Methyl-2-pentanone	ND	25	92	93	1.1	97	104	7.0	70 - 130	30	
Acetone	ND	10	61	58	5.0	58	65	11.4	70 - 130	30	l,m
Acrylonitrile	ND	5.0	96	96	0.0	98	105	6.9	70 - 130	30	
Benzene	ND	1.0	97	92	5.3	95	97	2.1	70 - 130	30	
Bromobenzene	ND	5.0	93	88	5.5	90	91	1.1	70 - 130	30	
Bromochloromethane	ND	5.0	93	90	3.3	94	94	0.0	70 - 130	30	
Bromodichloromethane	ND	5.0	101	98	3.0	98	99	1.0	70 - 130	30	
Bromoform	ND	5.0	101	99	2.0	90	95	5.4	70 - 130	30	
Bromomethane	ND	5.0	98	91	7.4	86	86	0.0	70 - 130	30	
Carbon Disulfide	ND	5.0	99	94	5.2	88	88	0.0	70 - 130	30	
Carbon tetrachloride	ND	5.0	108	104	3.8	98	100	2.0	70 - 130	30	
Chlorobenzene	ND	5.0	92	87	5.6	90	90	0.0	70 - 130	30	
Chloroethane	ND	5.0	101	94	7.2	87	88	1.1	70 - 130	30	
Chloroform	ND	5.0	96	93	3.2	94	95	1.1	70 - 130	30	
Chloromethane	ND	5.0	93	91	2.2	90	89	1.1	70 - 130	30	
cis-1,2-Dichloroethene	ND	5.0	98	93	5.2	96	99	3.1	70 - 130	30	
cis-1,3-Dichloropropene	ND	5.0	105	100	4.9	97	100	3.0	70 - 130	30	
Dibromochloromethane	ND	3.0	101	99	2.0	94	98	4.2	70 - 130	30	
Dibromomethane	ND	5.0	94	90	4.3	92	95	3.2	70 - 130	30	
Dichlorodifluoromethane	ND	5.0	115	109	5.4	109	108	0.9	70 - 130	30	
Ethylbenzene	ND	1.0	94	90	4.3	91	92	1.1	70 - 130	30	
Hexachlorobutadiene	ND	5.0	101	95	6.1	89	91	2.2	70 - 130	30	
Isopropylbenzene	ND	1.0	95	89	6.5	92	92	0.0	70 - 130	30	
m&p-Xylene	ND	2.0	93	89	4.4	89	89	0.0	70 - 130	30	
Methyl ethyl ketone	ND	5.0	83	83	0.0	82	89	8.2	70 - 130	30	
Methyl t-butyl ether (MTBE)	ND	1.0	92	89	3.3	90	92	2.2	70 - 130	30	
Methylene chloride	ND	5.0	75	71	5.5	70	71	1.4	70 - 130	30	
Naphthalene	ND	5.0	89	88	1.1	89	94	5.5	70 - 130	30	
n-Butylbenzene	ND	1.0	98	92	6.3	87	88	1.1	70 - 130	30	
n-Propylbenzene	ND	1.0	94	90	4.3	90	90	0.0	70 - 130	30	
o-Xylene	ND	2.0	97	92	5.3	96	95	1.0	70 - 130	30	
p-Isopropyltoluene	ND	1.0	98	93	5.2	91	92	1.1	70 - 130	30	
sec-Butylbenzene	ND	1.0	99	94	5.2	94	94	0.0	70 - 130	30	
Styrene	ND	5.0	95	90	5.4	92	93	1.1	70 - 130	30	
tert-Butylbenzene	ND	1.0	95	90	5.4	93	93	0.0	70 - 130	30	
Tetrachloroethene	ND	5.0	101	96	5.1	96	97	1.0	70 - 130	30	

QA/QC Data

SDG I.D.: GCB62410

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Tetrahydrofuran (THF)	ND	5.0	98	98	0.0	101	109	7.6	70 - 130	30
Toluene	ND	1.0	97	93	4.2	94	95	1.1	70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	85	82	3.6	80	80	0.0	70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	100	97	3.0	93	97	4.2	70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	115	114	0.9	98	105	6.9	70 - 130	30
Trichloroethene	ND	5.0	96	92	4.3	93	94	1.1	70 - 130	30
Trichlorofluoromethane	ND	5.0	93	87	6.7	82	82	0.0	70 - 130	30
Trichlorotrifluoroethane	ND	5.0	96	92	4.3	88	88	0.0	70 - 130	30
Vinyl chloride	ND	5.0	97	92	5.3	91	89	2.2	70 - 130	30
% 1,2-dichlorobenzene-d4	99	%	100	101	1.0	100	100	0.0	70 - 130	30
% Bromofluorobenzene	101	%	104	104	0.0	106	106	0.0	70 - 130	30
% Dibromofluoromethane	101	%	103	104	1.0	102	100	2.0	70 - 130	30
% Toluene-d8	102	%	101	101	0.0	101	102	1.0	70 - 130	30

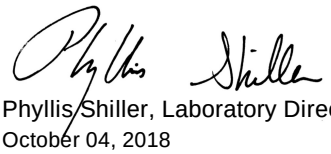
Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD 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
October 04, 2018

Thursday, October 04, 2018

Criteria: CT: GBM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCB62410 - TIGHE-DAS

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

*** No Data to Display ***

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.

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

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

Project Location: ROCKVILLE MGP ***Project Number:***

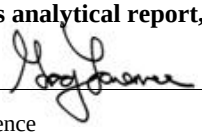
Laboratory Sample ID(s): CB62410 ***Sampling Date(s):*** 10/1/2018

List RCP Methods Used (e.g., 8260, 8270, et cetera) 8260, 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	***VPH and EPH methods only:*** **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 Reasonable Confidence Protocol documents acheived? See Section: VOA Narration.**	☐ Yes ☑ No
5	**a) Were reporting limits specified or referenced on the chain-of-custody?** **b) Were these reporting limits met?**	☑ Yes ☐ No ☑ 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 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:** Thursday, October 04, 2018

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

October 04, 2018

SDG I.D.: GCB62410

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.

ETPH Narration

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

Instrument:

AU-XL2 10/01/18-1 Jeff Bucko, Chemist 10/01/18

CB62410

The initial calibration (ETPH925I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 449736 (CB61602)

CB62410

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.

SVOA Narration

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

Instrument:

CHEM19 10/01/18-2 Wes Bryon, Chemist 10/01/18

CB62410

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 Verification (CHEM19/bn_0919):
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 (CHEM19/1001_33-bn_0919):
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.

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

October 04, 2018

SDG I.D.: GCB62410

SVOA Narration

QC (Batch Specific):

Batch 449730 (CB61557)

CB62410

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%)

VOA Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? No.

QC Batch 449891 (Samples: CB62410): -----

The QC recoveries for one analyte are below the lower range but within the method criteria. A slight low bias is likely. (Acetone)

Instrument:

CHEM26 10/01/18-2 Jane Li, Chemist 10/01/18

CB62410

Initial Calibration Verification (CHEM26/VT-0925):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: Acetone 27% (20%), Chloroethane 27% (20%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM26/1001_06-VT-0925):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Acetone 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 449891 (CB61701)

CB62410

All LCS recoveries were within 70 - 130 with the following exceptions: Acetone(61%)
All LCSD recoveries were within 70 - 130 with the following exceptions: Acetone(58%)
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Temperature Narration

The samples were received at 2.4C with cooling initiated.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler: Yes [x] No [ ]
Coolant: IPK [ ] ICE [x] No [ ]

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

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

Temp 2 4 °C Pg 1 of 1

Contact Options:
[ ] Fax:
[ ] Phone:
[x] Email: LWilley@tlgebard.com

Customer: Tighe + Bond
Address: 213 Court St Suite 1100
Middletown CT 06457

Project: Riverside MGP
Report to: Liam Willey
Invoice to: Tighe + Bond

Project P.O: 14-0755-4413

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 10/1/14

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

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOC	PAH	TCLP	Soil vOA Vials [x] methanol [x] H2O	GL Soil container (8) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle
62410	SB-63 (35-37 FT)	S	10/1/14	10:50	x	x	x	3	1								

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	10/1/14	18:10

Comments, Special Requirements or Regulations:
NJAS pricing
quote # 110825BA

Turnaround:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[x] Standard
[ ] Other
* SURCHARGE APPLIES

RI
[ ] Direct Exposure (Residential)
[ ] GW
[ ] Other

CT
[x] RCP Cert
[ ] GW Protection
[ ] SW Protection
[ ] GA Mobility
[x] GB Mobility
[x] Residential DEC
[x] I/C DEC
[ ] Other

MA
[ ] MCP Certification
[ ] GW-1
[ ] GW-2
[ ] GW-3
[ ] S-1
[ ] S-2
[ ] S-3
[ ] MWRA eSMART
[ ] Other

State where samples were collected: CT

Data Format
[x] Excel
[x] PDF
[ ] GIS/Key
[ ] EQuIS
[x] Other (EQuIS)

Data Package
[ ] Tier II Checklist
[ ] Full Data Package*
[x] Phoenix Std Report
[ ] Other
* SURCHARGE APPLIES

The Connecticut Light and Power Company
d/b/a Eversource Energy
Docket No. 26-05-10
Date Issued September 29, 2026
RSR-032 Attachment 17
Page 733 of 1282

PHOENIX
Environmental Laboratories, Inc.

Tuesday, October 23, 2018

Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Project ID: ROCKVILLE MGP
Sample ID#s: CB72216 - CB72218

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 have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

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

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

Analysis Report

October 23, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/15/18	12:45
Location Code:	TIGHE-DAS	Received by:	LB	10/16/18	12:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCB72216
Phoenix ID: CB72216

Project ID: ROCKVILLE MGP
Client ID: SB-66 (17-19 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	88		%		10/17/18	AK/IG	SW846-%Solid
Soil Extraction SVOA PAH	Completed				10/17/18	SJ/CKV	SW3545A
Extraction of CT ETPH	Completed				10/17/18	BA/VCK	SW3545A
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	55	mg/Kg	1	10/18/18	JRB	CTETPH 8015D
Identification	ND		mg/Kg	1	10/18/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	81		%	1	10/18/18	JRB	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.2	ug/Kg	1	10/18/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
1,1-Dichloroethane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
1,1-Dichloroethene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
1,1-Dichloropropene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
1,2-Dibromoethane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
1,2-Dichloroethane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
1,2-Dichloropropane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SB-66 (17-19 FT)

Phoenix I.D.: CB72216

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
1,3-Dichloropropane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
2,2-Dichloropropane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
2-Chlorotoluene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
2-Hexanone	ND	27	ug/Kg	1	10/18/18	JLI	SW8260C
2-Isopropyltoluene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
4-Chlorotoluene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	27	ug/Kg	1	10/18/18	JLI	SW8260C
Acetone	ND	270	ug/Kg	1	10/18/18	JLI	SW8260C
Acrylonitrile	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Benzene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Bromobenzene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Bromochloromethane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Bromodichloromethane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Bromoform	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Bromomethane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Carbon Disulfide	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Carbon tetrachloride	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Chlorobenzene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Chloroethane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Chloroform	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Chloromethane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Dibromochloromethane	ND	3.2	ug/Kg	1	10/18/18	JLI	SW8260C
Dibromomethane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Dichlorodifluoromethane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Ethylbenzene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Hexachlorobutadiene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Isopropylbenzene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
m&p-Xylene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	32	ug/Kg	1	10/18/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	11	ug/Kg	1	10/18/18	JLI	SW8260C
Methylene chloride	ND	11	ug/Kg	1	10/18/18	JLI	SW8260C
Naphthalene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
n-Butylbenzene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
n-Propylbenzene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
o-Xylene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
p-Isopropyltoluene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
sec-Butylbenzene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Styrene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
tert-Butylbenzene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Tetrachloroethene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	11	ug/Kg	1	10/18/18	JLI	SW8260C
Toluene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Total Xylenes	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-66 (17-19 FT)

Phoenix I.D.: CB72216

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,4-dichloro-2-butene	ND	11	ug/Kg	1	10/18/18	JLI	SW8260C
Trichloroethene	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Trichlorofluoromethane	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	11	ug/Kg	1	10/18/18	JLI	SW8260C
Vinyl chloride	ND	5.4	ug/Kg	1	10/18/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	10/18/18	JLI	70 - 130 %
% Bromofluorobenzene	96		%	1	10/18/18	JLI	70 - 130 %
% Dibromofluoromethane	98		%	1	10/18/18	JLI	70 - 130 %
% Toluene-d8	100		%	1	10/18/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	ND	260	ug/Kg	1	10/18/18	AW	SW8270D
Acenaphthene	ND	260	ug/Kg	1	10/18/18	AW	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	10/18/18	AW	SW8270D
Anthracene	ND	260	ug/Kg	1	10/18/18	AW	SW8270D
Benz(a)anthracene	ND	260	ug/Kg	1	10/18/18	AW	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	10/18/18	AW	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	10/18/18	AW	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	10/18/18	AW	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	10/18/18	AW	SW8270D
Chrysene	ND	260	ug/Kg	1	10/18/18	AW	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	10/18/18	AW	SW8270D
Fluoranthene	ND	260	ug/Kg	1	10/18/18	AW	SW8270D
Fluorene	ND	260	ug/Kg	1	10/18/18	AW	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	10/18/18	AW	SW8270D
Naphthalene	ND	260	ug/Kg	1	10/18/18	AW	SW8270D
Phenanthrene	ND	260	ug/Kg	1	10/18/18	AW	SW8270D
Pyrene	ND	260	ug/Kg	1	10/18/18	AW	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	37		%	1	10/18/18	AW	30 - 130 %
% Nitrobenzene-d5	35		%	1	10/18/18	AW	30 - 130 %
% Terphenyl-d14	41		%	1	10/18/18	AW	30 - 130 %
Field Extraction	Completed				10/15/18		SW5035A

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 there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
October 23, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Ver 1

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

Analysis Report

October 23, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/15/18	13:00
Location Code:	TIGHE-DAS	Received by:	LB	10/16/18	12:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCB72216
Phoenix ID: CB72217

Project ID: ROCKVILLE MGP
Client ID: SB-66 (27-29 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	83		%		10/16/18	ig	SW846-%Solid
Soil Extraction SVOA PAH	Completed				10/16/18	MJ/CKV	SW3545A
Extraction of CT ETPH	Completed				10/16/18	MJ/VCK	SW3545A
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	59	mg/Kg	1	10/17/18	JRB	CTETPH 8015D
Identification	ND		mg/Kg	1	10/17/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	74		%	1	10/17/18	JRB	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.9	ug/Kg	1	10/19/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
1,1-Dichloroethane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
1,1-Dichloroethene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
1,1-Dichloropropene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
1,2,4-Trimethylbenzene	8.2	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
1,2-Dibromoethane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
1,2-Dichloroethane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
1,2-Dichloropropane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-66 (27-29 FT)

Phoenix I.D.: CB72217

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
1,3-Dichloropropane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
2,2-Dichloropropane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
2-Chlorotoluene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
2-Hexanone	ND	33	ug/Kg	1	10/19/18	JLI	SW8260C
2-Isopropyltoluene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
4-Chlorotoluene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	33	ug/Kg	1	10/19/18	JLI	SW8260C
Acetone	ND	330	ug/Kg	1	10/19/18	JLI	SW8260C
Acrylonitrile	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Benzene	190	170	ug/Kg	50	10/18/18	JLI	SW8260C
Bromobenzene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Bromochloromethane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Bromodichloromethane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Bromoform	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Bromomethane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Carbon Disulfide	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Carbon tetrachloride	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Chlorobenzene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Chloroethane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Chloroform	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Chloromethane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Dibromochloromethane	ND	3.9	ug/Kg	1	10/19/18	JLI	SW8260C
Dibromomethane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Dichlorodifluoromethane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Ethylbenzene	230	170	ug/Kg	50	10/18/18	JLI	SW8260C
Hexachlorobutadiene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Isopropylbenzene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
m&p-Xylene	22	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	39	ug/Kg	1	10/19/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	13	ug/Kg	1	10/19/18	JLI	SW8260C
Methylene chloride	ND	13	ug/Kg	1	10/19/18	JLI	SW8260C
Naphthalene	570	420	ug/Kg	50	10/18/18	JLI	SW8260C
n-Butylbenzene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
n-Propylbenzene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
o-Xylene	24	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
p-Isopropyltoluene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
sec-Butylbenzene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Styrene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
tert-Butylbenzene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Tetrachloroethene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/Kg	1	10/19/18	JLI	SW8260C
Toluene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Total Xylenes	46.0	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SB-66 (27-29 FT)

Phoenix I.D.: CB72217

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,4-dichloro-2-butene	ND	13	ug/Kg	1	10/19/18	JLI	SW8260C
Trichloroethene	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Trichlorofluoromethane	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	13	ug/Kg	1	10/19/18	JLI	SW8260C
Vinyl chloride	ND	6.5	ug/Kg	1	10/19/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/19/18	JLI	70 - 130 %
% Bromofluorobenzene	96		%	1	10/19/18	JLI	70 - 130 %
% Dibromofluoromethane	94		%	1	10/19/18	JLI	70 - 130 %
% Toluene-d8	101		%	1	10/19/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	ND	280	ug/Kg	1	10/17/18	AW	SW8270D
Acenaphthene	ND	280	ug/Kg	1	10/17/18	AW	SW8270D
Acenaphthylene	ND	280	ug/Kg	1	10/17/18	AW	SW8270D
Anthracene	ND	280	ug/Kg	1	10/17/18	AW	SW8270D
Benz(a)anthracene	ND	280	ug/Kg	1	10/17/18	AW	SW8270D
Benzo(a)pyrene	ND	280	ug/Kg	1	10/17/18	AW	SW8270D
Benzo(b)fluoranthene	ND	280	ug/Kg	1	10/17/18	AW	SW8270D
Benzo(ghi)perylene	ND	280	ug/Kg	1	10/17/18	AW	SW8270D
Benzo(k)fluoranthene	ND	280	ug/Kg	1	10/17/18	AW	SW8270D
Chrysene	ND	280	ug/Kg	1	10/17/18	AW	SW8270D
Dibenz(a,h)anthracene	ND	280	ug/Kg	1	10/17/18	AW	SW8270D
Fluoranthene	ND	280	ug/Kg	1	10/17/18	AW	SW8270D
Fluorene	ND	280	ug/Kg	1	10/17/18	AW	SW8270D
Indeno(1,2,3-cd)pyrene	ND	280	ug/Kg	1	10/17/18	AW	SW8270D
Naphthalene	ND	280	ug/Kg	1	10/17/18	AW	SW8270D
Phenanthrene	ND	280	ug/Kg	1	10/17/18	AW	SW8270D
Pyrene	ND	280	ug/Kg	1	10/17/18	AW	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	57		%	1	10/17/18	AW	30 - 130 %
% Nitrobenzene-d5	53		%	1	10/17/18	AW	30 - 130 %
% Terphenyl-d14	68		%	1	10/17/18	AW	30 - 130 %
Field Extraction	Completed				10/15/18		SW5035A

Project ID: ROCKVILLE MGP
Client ID: SB-66 (27-29 FT)
Phoenix I.D.: CB72217

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

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:

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

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

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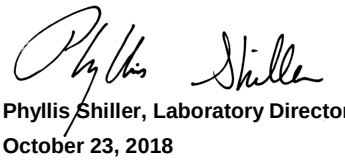

Phyllis Shiller, Laboratory Director
October 23, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

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

Analysis Report

October 23, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/15/18	10:45
Location Code:	TIGHE-DAS	Received by:	LB	10/16/18	12:10
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14-0755-44B				

Laboratory Data

SDG ID: GCB72216
Phoenix ID: CB72218

Project ID: ROCKVILLE MGP
Client ID: SB-67 (23-25 FT)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	90		%		10/16/18	ig	SW846-%Solid
Soil Extraction SVOA PAH	Completed				10/16/18	MJ/CKV	SW3545A
Extraction of CT ETPH	Completed				10/17/18	BA/VCK	SW3545A
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	54	mg/Kg	1	10/18/18	JRB	CTETPH 8015D
Identification	ND		mg/Kg	1	10/18/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	73		%	1	10/18/18	JRB	50 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	4.4	ug/Kg	1	10/17/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
1,1-Dichloroethane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
1,1-Dichloroethene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
1,1-Dichloropropene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
1,2-Dibromoethane	ND	7.0	ug/Kg	1	10/17/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
1,2-Dichloroethane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
1,2-Dichloropropane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-67 (23-25 FT)

Phoenix I.D.: CB72218

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
1,3-Dichloropropane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
2,2-Dichloropropane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
2-Chlorotoluene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
2-Hexanone	ND	37	ug/Kg	1	10/17/18	JLI	SW8260C
2-Isopropyltoluene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
4-Chlorotoluene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	37	ug/Kg	1	10/17/18	JLI	SW8260C
Acetone	ND	370	ug/Kg	1	10/17/18	JLI	SW8260C
Acrylonitrile	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Benzene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Bromobenzene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Bromochloromethane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Bromodichloromethane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Bromoform	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Bromomethane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Carbon Disulfide	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Carbon tetrachloride	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Chlorobenzene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Chloroethane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Chloroform	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Chloromethane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Dibromochloromethane	ND	4.4	ug/Kg	1	10/17/18	JLI	SW8260C
Dibromomethane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Dichlorodifluoromethane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Ethylbenzene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Hexachlorobutadiene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Isopropylbenzene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
m&p-Xylene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	44	ug/Kg	1	10/17/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	15	ug/Kg	1	10/17/18	JLI	SW8260C
Methylene chloride	ND	15	ug/Kg	1	10/17/18	JLI	SW8260C
Naphthalene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
n-Butylbenzene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
n-Propylbenzene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
o-Xylene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
p-Isopropyltoluene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
sec-Butylbenzene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Styrene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
tert-Butylbenzene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Tetrachloroethene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	15	ug/Kg	1	10/17/18	JLI	SW8260C
Toluene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Total Xylenes	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SB-67 (23-25 FT)

Phoenix I.D.: CB72218

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,4-dichloro-2-butene	ND	15	ug/Kg	1	10/17/18	JLI	SW8260C
Trichloroethene	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Trichlorofluoromethane	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	15	ug/Kg	1	10/17/18	JLI	SW8260C
Vinyl chloride	ND	7.3	ug/Kg	1	10/17/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/17/18	JLI	70 - 130 %
% Bromofluorobenzene	98		%	1	10/17/18	JLI	70 - 130 %
% Dibromofluoromethane	99		%	1	10/17/18	JLI	70 - 130 %
% Toluene-d8	100		%	1	10/17/18	JLI	70 - 130 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	ND	250	ug/Kg	1	10/17/18	AW	SW8270D
Acenaphthene	ND	250	ug/Kg	1	10/17/18	AW	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	10/17/18	AW	SW8270D
Anthracene	ND	250	ug/Kg	1	10/17/18	AW	SW8270D
Benz(a)anthracene	ND	250	ug/Kg	1	10/17/18	AW	SW8270D
Benzo(a)pyrene	ND	250	ug/Kg	1	10/17/18	AW	SW8270D
Benzo(b)fluoranthene	ND	250	ug/Kg	1	10/17/18	AW	SW8270D
Benzo(ghi)perylene	ND	250	ug/Kg	1	10/17/18	AW	SW8270D
Benzo(k)fluoranthene	ND	250	ug/Kg	1	10/17/18	AW	SW8270D
Chrysene	ND	250	ug/Kg	1	10/17/18	AW	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	10/17/18	AW	SW8270D
Fluoranthene	ND	250	ug/Kg	1	10/17/18	AW	SW8270D
Fluorene	ND	250	ug/Kg	1	10/17/18	AW	SW8270D
Indeno(1,2,3-cd)pyrene	ND	250	ug/Kg	1	10/17/18	AW	SW8270D
Naphthalene	ND	250	ug/Kg	1	10/17/18	AW	SW8270D
Phenanthrene	ND	250	ug/Kg	1	10/17/18	AW	SW8270D
Pyrene	ND	250	ug/Kg	1	10/17/18	AW	SW8270D
QA/QC Surrogates							
% 2-Fluorobiphenyl	58		%	1	10/17/18	AW	30 - 130 %
% Nitrobenzene-d5	53		%	1	10/17/18	AW	30 - 130 %
% Terphenyl-d14	70		%	1	10/17/18	AW	30 - 130 %
Field Extraction	Completed				10/15/18		SW5035A

Project ID: ROCKVILLE MGP
Client ID: SB-67 (23-25 FT)
Phoenix I.D.: CB72218

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

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:

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

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

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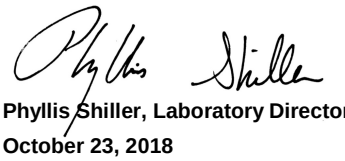

Phyllis Shiller, Laboratory Director
October 23, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

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QA/QC Report

October 23, 2018

QA/QC Data

SDG I.D.: GCB72216

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 452026 (mg/Kg), QC Sample No: CB71848 (CB72217)											
TPH by GC (Extractable Products) - Soil											
Ext. Petroleum H.C. (C9-C36)	ND	50	83	72	14.2	97	101	4.0	60 - 120	30	
% n-Pentacosane	66	%	70	54	25.8	68	72	5.7	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 452158 (ug/kg), QC Sample No: CB72189 (CB72218)											
Volatiles - Soil											
1,1,1,2-Tetrachloroethane	ND	5.0	101	105	3.9	103	107	3.8	70 - 130	30	
1,1,1-Trichloroethane	ND	5.0	103	103	0.0	109	109	0.0	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	3.0	102	102	0.0	115	122	5.9	70 - 130	30	
1,1,2-Trichloroethane	ND	5.0	100	102	2.0	107	101	5.8	70 - 130	30	
1,1-Dichloroethane	ND	5.0	97	99	2.0	102	104	1.9	70 - 130	30	
1,1-Dichloroethene	ND	5.0	103	104	1.0	112	113	0.9	70 - 130	30	
1,1-Dichloropropene	ND	5.0	102	102	0.0	118	106	10.7	70 - 130	30	
1,2,3-Trichlorobenzene	ND	5.0	98	98	0.0	101	99	2.0	70 - 130	30	
1,2,3-Trichloropropane	ND	5.0	96	97	1.0	108	115	6.3	70 - 130	30	
1,2,4-Trichlorobenzene	ND	5.0	98	96	2.1	103	100	3.0	70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	95	95	0.0	102	106	3.8	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	106	107	0.9	101	112	10.3	70 - 130	30	
1,2-Dibromoethane	ND	5.0	99	102	3.0	97	100	3.0	70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	94	95	1.1	85	92	7.9	70 - 130	30	
1,2-Dichloroethane	ND	5.0	101	102	1.0	113	103	9.3	70 - 130	30	
1,2-Dichloropropane	ND	5.0	99	97	2.0	112	102	9.3	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	95	96	1.0	105	111	5.6	70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	95	95	0.0	89	96	7.6	70 - 130	30	
1,3-Dichloropropane	ND	5.0	97	99	2.0	99	102	3.0	70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	93	93	0.0	86	93	7.8	70 - 130	30	
2,2-Dichloropropane	ND	5.0	107	105	1.9	106	108	1.9	70 - 130	30	
2-Chlorotoluene	ND	5.0	96	96	0.0	105	113	7.3	70 - 130	30	
2-Hexanone	ND	25	89	90	1.1	72	69	4.3	70 - 130	30	m
2-Isopropyltoluene	ND	5.0	101	101	0.0	103	110	6.6	70 - 130	30	
4-Chlorotoluene	ND	5.0	94	94	0.0	98	105	6.9	70 - 130	30	
4-Methyl-2-pentanone	ND	25	98	99	1.0	93	80	15.0	70 - 130	30	
Acetone	ND	10	111	118	6.1	77	80	3.8	70 - 130	30	
Acrylonitrile	ND	5.0	101	100	1.0	92	99	7.3	70 - 130	30	
Benzene	ND	1.0	98	99	1.0	114	103	10.1	70 - 130	30	
Bromobenzene	ND	5.0	95	97	2.1	103	110	6.6	70 - 130	30	
Bromochloromethane	ND	5.0	103	106	2.9	105	108	2.8	70 - 130	30	
Bromodichloromethane	ND	5.0	105	97	7.9	107	101	5.8	70 - 130	30	
Bromoform	ND	5.0	110	112	1.8	88	99	11.8	70 - 130	30	
Bromomethane	ND	5.0	100	101	1.0	107	107	0.0	70 - 130	30	

QA/QC Data

SDG I.D.: GCB72216

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Carbon Disulfide	ND	5.0	108	110	1.8	110	112	1.8	70 - 130	30
Carbon tetrachloride	ND	5.0	107	108	0.9	107	109	1.9	70 - 130	30
Chlorobenzene	ND	5.0	95	97	2.1	95	97	2.1	70 - 130	30
Chloroethane	ND	5.0	103	104	1.0	114	114	0.0	70 - 130	30
Chloroform	ND	5.0	100	101	1.0	105	105	0.0	70 - 130	30
Chloromethane	ND	5.0	82	84	2.4	95	100	5.1	70 - 130	30
cis-1,2-Dichloroethene	ND	5.0	100	102	2.0	104	104	0.0	70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	104	105	1.0	102	96	6.1	70 - 130	30
Dibromochloromethane	ND	3.0	110	114	3.6	100	107	6.8	70 - 130	30
Dibromomethane	ND	5.0	102	101	1.0	109	102	6.6	70 - 130	30
Dichlorodifluoromethane	ND	5.0	97	97	0.0	103	108	4.7	70 - 130	30
Ethylbenzene	ND	1.0	96	97	1.0	100	102	2.0	70 - 130	30
Hexachlorobutadiene	ND	5.0	102	101	1.0	107	105	1.9	70 - 130	30
Isopropylbenzene	ND	1.0	96	97	1.0	116	122	5.0	70 - 130	30
m&p-Xylene	ND	2.0	96	97	1.0	98	99	1.0	70 - 130	30
Methyl ethyl ketone	ND	5.0	90	91	1.1	80	82	2.5	70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	109	112	2.7	111	113	1.8	70 - 130	30
Methylene chloride	ND	5.0	91	93	2.2	97	97	0.0	70 - 130	30
Naphthalene	ND	5.0	100	102	2.0	102	103	1.0	70 - 130	30
n-Butylbenzene	ND	1.0	98	95	3.1	89	96	7.6	70 - 130	30
n-Propylbenzene	ND	1.0	94	95	1.1	109	115	5.4	70 - 130	30
o-Xylene	ND	2.0	100	101	1.0	101	104	2.9	70 - 130	30
p-Isopropyltoluene	ND	1.0	97	97	0.0	98	105	6.9	70 - 130	30
sec-Butylbenzene	ND	1.0	100	100	0.0	103	111	7.5	70 - 130	30
Styrene	ND	5.0	99	100	1.0	91	94	3.2	70 - 130	30
tert-Butylbenzene	ND	1.0	96	97	1.0	107	113	5.5	70 - 130	30
Tetrachloroethene	ND	5.0	102	101	1.0	112	104	7.4	70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	102	102	0.0	96	98	2.1	70 - 130	30
Toluene	ND	1.0	98	98	0.0	110	101	8.5	70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	103	103	0.0	109	109	0.0	70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	103	104	1.0	97	92	5.3	70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	113	115	1.8	97	108	10.7	70 - 130	30
Trichloroethene	ND	5.0	100	101	1.0	100	102	2.0	70 - 130	30
Trichlorofluoromethane	ND	5.0	96	96	0.0	103	104	1.0	70 - 130	30
Trichlorotrifluoroethane	ND	5.0	106	106	0.0	113	114	0.9	70 - 130	30
Vinyl chloride	ND	5.0	94	95	1.1	104	105	1.0	70 - 130	30
% 1,2-dichlorobenzene-d4	100	%	101	101	0.0	98	100	2.0	70 - 130	30
% Bromofluorobenzene	98	%	99	101	2.0	93	94	1.1	70 - 130	30
% Dibromofluoromethane	105	%	104	105	1.0	101	101	0.0	70 - 130	30
% Toluene-d8	100	%	101	99	2.0	110	99	10.5	70 - 130	30

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 452554 (ug/kg), QC Sample No: CB72216 (CB72216)

Volatiles - Soil

1,1,1,2-Tetrachloroethane	ND	5.0	102	103	1.0	103	101	2.0	70 - 130	30
1,1,1-Trichloroethane	ND	5.0	106	105	0.9	102	100	2.0	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	3.0	102	106	3.8	103	102	1.0	70 - 130	30
1,1,2-Trichloroethane	ND	5.0	96	99	3.1	98	97	1.0	70 - 130	30
1,1-Dichloroethane	ND	5.0	105	104	1.0	102	101	1.0	70 - 130	30
1,1-Dichloroethene	ND	5.0	106	104	1.9	107	105	1.9	70 - 130	30
1,1-Dichloropropene	ND	5.0	104	104	0.0	106	101	4.8	70 - 130	30
1,2,3-Trichlorobenzene	ND	5.0	102	109	6.6	93	85	9.0	70 - 130	30

QA/QC Data

SDG I.D.: GCB72216

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2,3-Trichloropropane	ND	5.0	104	102	1.9	101	99	2.0	70 - 130	30
1,2,4-Trichlorobenzene	ND	5.0	102	108	5.7	91	83	9.2	70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	104	103	1.0	103	97	6.0	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	5.0	106	113	6.4	96	95	1.0	70 - 130	30
1,2-Dibromoethane	ND	5.0	98	104	5.9	101	100	1.0	70 - 130	30
1,2-Dichlorobenzene	ND	5.0	100	100	0.0	98	96	2.1	70 - 130	30
1,2-Dichloroethane	ND	5.0	100	101	1.0	95	95	0.0	70 - 130	30
1,2-Dichloropropane	ND	5.0	100	100	0.0	101	99	2.0	70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	105	102	2.9	105	98	6.9	70 - 130	30
1,3-Dichlorobenzene	ND	5.0	100	101	1.0	99	95	4.1	70 - 130	30
1,3-Dichloropropane	ND	5.0	99	102	3.0	98	98	0.0	70 - 130	30
1,4-Dichlorobenzene	ND	5.0	99	99	0.0	97	94	3.1	70 - 130	30
2,2-Dichloropropane	ND	5.0	112	114	1.8	108	102	5.7	70 - 130	30
2-Chlorotoluene	ND	5.0	102	102	0.0	103	99	4.0	70 - 130	30
2-Hexanone	ND	25	98	104	5.9	92	91	1.1	70 - 130	30
2-Isopropyltoluene	ND	5.0	104	104	0.0	104	96	8.0	70 - 130	30
4-Chlorotoluene	ND	5.0	100	100	0.0	100	96	4.1	70 - 130	30
4-Methyl-2-pentanone	ND	25	101	107	5.8	95	94	1.1	70 - 130	30
Acetone	ND	10	78	80	2.5	71	72	1.4	70 - 130	30
Acrylonitrile	ND	5.0	99	103	4.0	93	95	2.1	70 - 130	30
Benzene	ND	1.0	100	100	0.0	104	101	2.9	70 - 130	30
Bromobenzene	ND	5.0	98	101	3.0	101	97	4.0	70 - 130	30
Bromochloromethane	ND	5.0	104	102	1.9	100	99	1.0	70 - 130	30
Bromodichloromethane	ND	5.0	103	103	0.0	101	100	1.0	70 - 130	30
Bromoform	ND	5.0	106	112	5.5	103	103	0.0	70 - 130	30
Bromomethane	ND	5.0	91	80	12.9	95	92	3.2	70 - 130	30
Carbon Disulfide	ND	5.0	114	109	4.5	111	110	0.9	70 - 130	30
Carbon tetrachloride	ND	5.0	112	111	0.9	105	103	1.9	70 - 130	30
Chlorobenzene	ND	5.0	103	100	3.0	102	99	3.0	70 - 130	30
Chloroethane	ND	5.0	98	98	0.0	96	94	2.1	70 - 130	30
Chloroform	ND	5.0	102	102	0.0	99	97	2.0	70 - 130	30
Chloromethane	ND	5.0	93	92	1.1	82	84	2.4	70 - 130	30
cis-1,2-Dichloroethene	ND	5.0	103	104	1.0	106	103	2.9	70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	103	104	1.0	102	100	2.0	70 - 130	30
Dibromochloromethane	ND	3.0	108	112	3.6	106	105	0.9	70 - 130	30
Dibromomethane	ND	5.0	98	99	1.0	97	97	0.0	70 - 130	30
Dichlorodifluoromethane	ND	5.0	100	98	2.0	94	89	5.5	70 - 130	30
Ethylbenzene	ND	1.0	104	102	1.9	104	100	3.9	70 - 130	30
Hexachlorobutadiene	ND	5.0	104	109	4.7	94	76	21.2	70 - 130	30
Isopropylbenzene	ND	1.0	106	106	0.0	108	103	4.7	70 - 130	30
m&p-Xylene	ND	2.0	106	102	3.8	104	100	3.9	70 - 130	30
Methyl ethyl ketone	ND	5.0	94	97	3.1	81	81	0.0	70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	99	101	2.0	93	94	1.1	70 - 130	30
Methylene chloride	ND	5.0	95	95	0.0	98	99	1.0	70 - 130	30
Naphthalene	ND	5.0	107	117	8.9	98	94	4.2	70 - 130	30
n-Butylbenzene	ND	1.0	105	105	0.0	101	89	12.6	70 - 130	30
n-Propylbenzene	ND	1.0	104	103	1.0	104	97	7.0	70 - 130	30
o-Xylene	ND	2.0	105	106	0.9	108	104	3.8	70 - 130	30
p-Isopropyltoluene	ND	1.0	106	105	0.9	104	94	10.1	70 - 130	30
sec-Butylbenzene	ND	1.0	110	109	0.9	109	99	9.6	70 - 130	30
Styrene	ND	5.0	106	105	0.9	106	104	1.9	70 - 130	30
tert-Butylbenzene	ND	1.0	105	104	1.0	107	98	8.8	70 - 130	30
Tetrachloroethene	ND	5.0	99	100	1.0	106	100	5.8	70 - 130	30

QA/QC Data

SDG I.D.: GCB72216

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Tetrahydrofuran (THF)	ND	5.0	97	103	6.0	85	86	1.2	70 - 130	30	
Toluene	ND	1.0	101	101	0.0	103	100	3.0	70 - 130	30	
trans-1,2-Dichloroethene	ND	5.0	103	103	0.0	102	102	0.0	70 - 130	30	
trans-1,3-Dichloropropene	ND	5.0	101	103	2.0	96	95	1.0	70 - 130	30	
trans-1,4-dichloro-2-butene	ND	5.0	112	115	2.6	105	104	1.0	70 - 130	30	
Trichloroethene	ND	5.0	103	103	0.0	103	100	3.0	70 - 130	30	
Trichlorofluoromethane	ND	5.0	101	98	3.0	98	95	3.1	70 - 130	30	
Trichlorotrifluoroethane	ND	5.0	103	101	2.0	102	96	6.1	70 - 130	30	
Vinyl chloride	ND	5.0	103	100	3.0	101	98	3.0	70 - 130	30	
% 1,2-dichlorobenzene-d4	99	%	100	100	0.0	99	100	1.0	70 - 130	30	
% Bromofluorobenzene	97	%	99	98	1.0	100	100	0.0	70 - 130	30	
% Dibromofluoromethane	95	%	99	99	0.0	102	103	1.0	70 - 130	30	
% Toluene-d8	98	%	100	100	0.0	99	98	1.0	70 - 130	30	

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 452018 (ug/kg), QC Sample No: CB72472 (CB72217, CB72218)

Polynuclear Aromatic HC - Soil

2-Methylnaphthalene	ND	230	68	53	24.8	64	65	1.6	30 - 130	30	
Acenaphthene	ND	230	71	56	23.6	65	64	1.6	30 - 130	30	
Acenaphthylene	ND	230	67	53	23.3	62	62	0.0	30 - 130	30	
Anthracene	ND	230	80	60	28.6	68	69	1.5	30 - 130	30	
Benz(a)anthracene	ND	230	80	61	27.0	67	67	0.0	30 - 130	30	
Benzo(a)pyrene	ND	230	81	61	28.2	68	68	0.0	30 - 130	30	
Benzo(b)fluoranthene	ND	230	84	62	30.1	69	72	4.3	30 - 130	30	
Benzo(ghi)perylene	ND	230	77	57	29.9	62	56	10.2	30 - 130	30	
Benzo(k)fluoranthene	ND	230	80	60	28.6	66	65	1.5	30 - 130	30	
Chrysene	ND	230	78	60	26.1	66	67	1.5	30 - 130	30	
Dibenz(a,h)anthracene	ND	230	86	64	29.3	71	64	10.4	30 - 130	30	
Fluoranthene	ND	230	83	65	24.3	70	72	2.8	30 - 130	30	
Fluorene	ND	230	75	58	25.6	67	68	1.5	30 - 130	30	
Indeno(1,2,3-cd)pyrene	ND	230	85	61	32.9	66	63	4.7	30 - 130	30	r
Naphthalene	ND	230	62	49	23.4	59	60	1.7	30 - 130	30	
Phenanthrene	ND	230	76	58	26.9	65	64	1.6	30 - 130	30	
Pyrene	ND	230	83	65	24.3	70	73	4.2	30 - 130	30	
% 2-Fluorobiphenyl	41	%	67	54	21.5	61	59	3.3	30 - 130	30	
% Nitrobenzene-d5	36	%	63	48	27.0	64	67	4.6	30 - 130	30	
% Terphenyl-d14	48	%	75	59	23.9	63	66	4.7	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%)

QA/QC Batch 452170 (ug/kg), QC Sample No: CB73486 (CB72216)

Polynuclear Aromatic HC - Soil

2-Methylnaphthalene	ND	230	68			63	60	4.9	30 - 130	30	
Acenaphthene	ND	230	65			59	61	3.3	30 - 130	30	
Acenaphthylene	ND	230	63			57	58	1.7	30 - 130	30	
Anthracene	ND	230	70			65	69	6.0	30 - 130	30	
Benz(a)anthracene	ND	230	70			63	67	6.2	30 - 130	30	
Benzo(a)pyrene	ND	230	70			62	66	6.3	30 - 130	30	
Benzo(b)fluoranthene	ND	230	71			64	66	3.1	30 - 130	30	
Benzo(ghi)perylene	ND	230	65			58	62	6.7	30 - 130	30	
Benzo(k)fluoranthene	ND	230	68			60	65	8.0	30 - 130	30	
Chrysene	ND	230	68			61	66	7.9	30 - 130	30	

QA/QC Data

SDG I.D.: GCB72216

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Dibenz(a,h)anthracene	ND	230	73			65	70	7.4	30 - 130	30	
Fluoranthene	ND	230	76			68	72	5.7	30 - 130	30	
Fluorene	ND	230	69			63	65	3.1	30 - 130	30	
Indeno(1,2,3-cd)pyrene	ND	230	69			62	65	4.7	30 - 130	30	
Naphthalene	ND	230	61			56	54	3.6	30 - 130	30	
Phenanthrene	ND	230	66			61	64	4.8	30 - 130	30	
Pyrene	ND	230	76			69	73	5.6	30 - 130	30	
% 2-Fluorobiphenyl	55	%	62			57	57	0.0	30 - 130	30	
% Nitrobenzene-d5	51	%	61			60	56	6.9	30 - 130	30	
% Terphenyl-d14	61	%	67			62	66	6.3	30 - 130	30	

Comment:

This batch consists of a blank, LCS, MS and MSD.

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%)

QA/QC Batch 452210 (mg/Kg), QC Sample No: CB73532 (CB72216, CB72218)

TPH by GC (Extractable Products) - Soil

Ext. Petroleum H.C. (C9-C36)	ND	50	71	66	7.3	96	102	6.1	60 - 120	30	
% n-Pentacosane	57	%	60	56	6.9	62	67	7.8	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 452515 (ug/kg), QC Sample No: CB73701 (CB72217 (50X))

Volatiles - Soil

Benzene	ND	1.0	105	103	1.9	117	116	0.9	70 - 130	30	
Ethylbenzene	ND	1.0	108	107	0.9	122	120	1.7	70 - 130	30	
Naphthalene	ND	5.0	108	112	3.6	124	120	3.3	70 - 130	30	

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 452609 (ug/kg), QC Sample No: CB74408 (CB72217)

Volatiles - Soil

1,1,1,2-Tetrachloroethane	ND	5.0	114	115	0.9	127	131	3.1	70 - 130	30	m
1,1,1-Trichloroethane	ND	5.0	110	113	2.7	122	120	1.7	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	3.0	107	114	6.3	136	139	2.2	70 - 130	30	m
1,1,2-Trichloroethane	ND	5.0	104	104	0.0	121	125	3.3	70 - 130	30	
1,1-Dichloroethane	ND	5.0	112	113	0.9	114	113	0.9	70 - 130	30	
1,1-Dichloroethene	ND	5.0	117	120	2.5	95	99	4.1	70 - 130	30	
1,1-Dichloropropene	ND	5.0	111	116	4.4	125	122	2.4	70 - 130	30	
1,2,3-Trichlorobenzene	ND	5.0	108	110	1.8	122	123	0.8	70 - 130	30	
1,2,3-Trichloropropane	ND	5.0	98	101	3.0	127	127	0.0	70 - 130	30	
1,2,4-Trichlorobenzene	ND	5.0	111	113	1.8	123	125	1.6	70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	109	111	1.8	124	123	0.8	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	110	120	8.7	140	140	0.0	70 - 130	30	m
1,2-Dibromoethane	ND	5.0	107	108	0.9	124	128	3.2	70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	107	109	1.9	125	126	0.8	70 - 130	30	
1,2-Dichloroethane	ND	5.0	104	106	1.9	118	119	0.8	70 - 130	30	
1,2-Dichloropropane	ND	5.0	105	108	2.8	121	123	1.6	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	110	112	1.8	124	122	1.6	70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	110	111	0.9	125	125	0.0	70 - 130	30	
1,3-Dichloropropane	ND	5.0	104	106	1.9	122	126	3.2	70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	109	111	1.8	123	124	0.8	70 - 130	30	
2,2-Dichloropropane	ND	5.0	112	115	2.6	116	115	0.9	70 - 130	30	

QA/QC Data

SDG I.D.: GCB72216

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
2-Chlorotoluene	ND	5.0	109	110	0.9	122	122	0.0	70 - 130	30	
2-Hexanone	ND	25	91	99	8.4	118	124	5.0	70 - 130	30	
2-Isopropyltoluene	ND	5.0	110	113	2.7	127	126	0.8	70 - 130	30	
4-Chlorotoluene	ND	5.0	109	112	2.7	121	123	1.6	70 - 130	30	
4-Methyl-2-pentanone	ND	25	100	106	5.8	121	126	4.0	70 - 130	30	
Acetone	ND	10	79	85	7.3	79	72	9.3	70 - 130	30	
Acrylonitrile	ND	5.0	98	105	6.9	113	115	1.8	70 - 130	30	
Bromobenzene	ND	5.0	105	107	1.9	121	121	0.0	70 - 130	30	
Bromochloromethane	ND	5.0	111	111	0.0	122	126	3.2	70 - 130	30	
Bromodichloromethane	ND	5.0	111	114	2.7	123	126	2.4	70 - 130	30	
Bromoform	ND	5.0	117	119	1.7	131	138	5.2	70 - 130	30	m
Bromomethane	ND	5.0	99	98	1.0	68	77	12.4	70 - 130	30	m
Carbon Disulfide	ND	5.0	120	123	2.5	100	82	19.8	70 - 130	30	
Carbon tetrachloride	ND	5.0	111	115	3.5	120	117	2.5	70 - 130	30	
Chlorobenzene	ND	5.0	111	111	0.0	121	124	2.4	70 - 130	30	
Chloroethane	ND	5.0	91	86	5.6	69	77	11.0	70 - 130	30	m
Chloroform	ND	5.0	106	108	1.9	118	111	6.1	70 - 130	30	
Chloromethane	ND	5.0	96	97	1.0	109	105	3.7	70 - 130	30	
cis-1,2-Dichloroethene	ND	5.0	118	117	0.9	128	131	2.3	70 - 130	30	m
cis-1,3-Dichloropropene	ND	5.0	109	110	0.9	119	122	2.5	70 - 130	30	
Dibromochloromethane	ND	3.0	119	121	1.7	133	140	5.1	70 - 130	30	m
Dibromomethane	ND	5.0	105	107	1.9	120	123	2.5	70 - 130	30	
Dichlorodifluoromethane	ND	5.0	100	105	4.9	110	107	2.8	70 - 130	30	
Hexachlorobutadiene	ND	5.0	110	117	6.2	134	132	1.5	70 - 130	30	m
Isopropylbenzene	ND	1.0	111	114	2.7	126	124	1.6	70 - 130	30	
m&p-Xylene	ND	2.0	113	115	1.8	124	125	0.8	70 - 130	30	
Methyl ethyl ketone	ND	5.0	87	99	12.9	108	116	7.1	70 - 130	30	
Methyl t-butyl ether (MTBE)	ND	1.0	102	104	1.9	110	112	1.8	70 - 130	30	
Methylene chloride	ND	5.0	104	104	0.0	106	102	3.8	70 - 130	30	
n-Butylbenzene	ND	1.0	113	117	3.5	130	127	2.3	70 - 130	30	
n-Propylbenzene	ND	1.0	111	114	2.7	126	122	3.2	70 - 130	30	
o-Xylene	ND	2.0	111	112	0.9	125	128	2.4	70 - 130	30	
p-Isopropyltoluene	ND	1.0	111	115	3.5	128	126	1.6	70 - 130	30	
sec-Butylbenzene	ND	1.0	115	121	5.1	134	132	1.5	70 - 130	30	m
Styrene	ND	5.0	113	113	0.0	127	131	3.1	70 - 130	30	m
tert-Butylbenzene	ND	1.0	108	112	3.6	126	124	1.6	70 - 130	30	
Tetrachloroethene	ND	5.0	111	114	2.7	122	120	1.7	70 - 130	30	
Tetrahydrofuran (THF)	ND	5.0	96	103	7.0	118	121	2.5	70 - 130	30	
Toluene	ND	1.0	109	112	2.7	122	122	0.0	70 - 130	30	
trans-1,2-Dichloroethene	ND	5.0	113	114	0.9	115	110	4.4	70 - 130	30	
trans-1,3-Dichloropropene	ND	5.0	104	107	2.8	116	120	3.4	70 - 130	30	
trans-1,4-dichloro-2-butene	ND	5.0	118	126	6.6	132	134	1.5	70 - 130	30	m
Trichloroethene	ND	5.0	111	114	2.7	121	119	1.7	70 - 130	30	
Trichlorofluoromethane	ND	5.0	109	110	0.9	60	91	41.1	70 - 130	30	m,r
Trichlorotrifluoroethane	ND	5.0	113	119	5.2	104	88	16.7	70 - 130	30	
Vinyl chloride	ND	5.0	110	113	2.7	117	114	2.6	70 - 130	30	
% 1,2-dichlorobenzene-d4	101	%	100	101	1.0	101	100	1.0	70 - 130	30	
% Bromofluorobenzene	95	%	101	100	1.0	101	104	2.9	70 - 130	30	
% Dibromofluoromethane	100	%	100	102	2.0	95	95	0.0	70 - 130	30	
% Toluene-d8	101	%	99	99	0.0	99	99	0.0	70 - 130	30	

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Data

SDG I.D.: GCB72216

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

m = This parameter is outside laboratory MS/MSD specified recovery limits.
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
October 23, 2018

Tuesday, October 23, 2018

Criteria: CT: GBM, RC

State: CT

Sample Criteria Exceedances Report

GCB72216 - TIGHE-DAS

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

*** No Data to Display ***

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.

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

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

Project Location: ROCKVILLE MGP ***Project Number:***

Laboratory Sample ID(s): CB72216-CB72218 ***Sampling Date(s):*** 10/15/2018

List RCP Methods Used (e.g., 8260, 8270, et cetera) 8260, 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	***VPH and EPH methods only:*** **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?** **b) Were these reporting limits met?**	☑ Yes ☐ No ☑ 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 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: Phyllis Shiller **Position:** Laboratory Director

Printed Name: Phyllis Shiller **Date:** Tuesday, October 23, 2018

Name of Laboratory Phoenix Environmental Labs, Inc.

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

CTDEP RCP Laboratory Analysis QA/QC Certification Form - November 2007
Laboratory Quality Assurance and Quality Control Guidance Reasonable Confidence Protocols

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

October 23, 2018

SDG I.D.: GCB72216

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.

ETPH Narration

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

Instrument:

AU-FID22 10/16/18-1 Jeff Bucko, Chemist 10/16/18

CB72217

The initial calibration (ETPH921I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-FID84 10/17/18-1 Jeff Bucko, Chemist 10/17/18

CB72216, CB72218

The initial calibration (ETPHO12I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 452026 (CB71848)

CB72217

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.

Batch 452210 (CB73532)

CB72216, CB72218

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.

SVOA Narration

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

Instrument:

CHEM28 10/16/18-1 Adam Werner, Chemist 10/16/18

CB72217, CB72218

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 Verification (CHEM28/28_BN_1009):

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

October 23, 2018

SDG I.D.: GCB72216

SVOA Narration

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 (CHEM28/1016_06-28_BN_1009):
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.

CHEM28 10/17/18-2 Adam Werner, Chemist 10/17/18

CB72216

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 Verification (CHEM28/28_BN_1009):
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 (CHEM28/1017_27-28_BN_1009):
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 452018 (CB72472)

CB72217, CB72218

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: Indeno(1,2,3-cd)pyrene(32.9%)
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%)

Batch 452170 (CB73486)

CB72216

All LCS recoveries were within 30 - 130 with the following exceptions: None.
This batch consists of a blank, LCS, MS and MSD.
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%)

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

October 23, 2018

SDG I.D.: GCB72216

VOA Narration

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

Instrument:

CHEM03 10/18/18-2 Jane Li, Chemist 10/18/18

CB72216

Initial Calibration Verification (CHEM03/VT-L1018):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: Acetone 23% (20%), Bromomethane 24% (20%), Chloroethane 27% (20%)
The following compounds did not meet recommended response factors: Tetrachloroethene 0.195 (0.2)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM03/1018L16-VT-L1018):
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.

CHEM26 10/16/18-2 Jane Li, Chemist 10/16/18

CB72218

Initial Calibration Verification (CHEM26/VT-1009):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: trans-1,4-dichloro-2-butene 21% (20%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM26/1016_32-VT-1009):
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.

CHEM31 10/18/18-1 Jane Li, Chemist 10/18/18

CB72217

Initial Calibration Verification (CHEM31/VT-L1017):
96% 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 (CHEM31/1018_02-VT-L1017):
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.

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RCP Certification Report

October 23, 2018

SDG I.D.: GCB72216

VOA Narration

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

CHEM31 10/18/18-2 Jane Li, Chemist 10/18/18

CB72217

Initial Calibration Verification (CHEM31/VT-L1017):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 21% (20%), Acetone 21% (20%), Bromoform 24% (20%)
The following compounds did not meet recommended response factors: Acetone 0.092 (0.1), Bromodichloromethane 0.186 (0.2), Bromoform 0.073 (0.1), Tetrachloroethene 0.143 (0.2), Trichloroethene 0.192 (0.2)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM31/1018_32-VT-L1017):
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: 1,2-Dibromo-3-chloropropane 0.046 (0.05), Bromoform 0.072 (0.1)
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 452158 (CB72189)

CB72218

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Batch 452515 (CB73701)

CB72217

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Batch 452609 (CB74408)

CB72217

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QC (Site Specific):

Batch 452554 (CB72216)

CB72216

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

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RCP Certification Report

October 23, 2018

SDG I.D.: GCB72216

VOA 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.
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 30% with the following exceptions: None.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Temperature Narration

The samples in this delivery group were received at 2.6°C.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler: Yes [X] No [ ]
Coolant: IPK [X] ICE [ ] No [ ]

CHAIN OF CUSTODY RECORD

Temp. 2.0 ° C Pg 1 of 1

PHOENIX *Environmental Laboratories, Inc.*

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

Data Delivery/Contact Options:
[ ] Fax:
[ ] Phone:
[■] Email: LEWilley@TighеBond.com

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

Project: 12-5014 Chapel Haven
Report to: Chris Koelle
Invoice to: Tighe & Bond
QUOTE # TI012517BA

Project P.O: 14-0755-44B

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 10/15/18

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

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOCs	ETPH	PAHs	GL Amber 8 oz. w/H3PO4	Soil VOA Vials [X] methanol [X] H2O	GL Soil container ( ) oz	GL Soil container (8) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	25 Gram EnCore	Bacteria Bottle as is
72216	SB-66 (17-19 ft)	S	10/15/2018	12:45					3		1								
72217	SB-66 (27-29 ft)	S	10/15/2018	13:00	X	X	X		3		1								
72218	SB-67 (23-25 ft)	S	10/15/2018	10:45	X	X	X		3		1								

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	10/16/18	10:45
[signature]	[signature]	10/16/18	1210

Comments, Special Requirements or Regulations:

DAS Pricing Quote: TI012517BA

Please hold samples not marked for analysis

Turnaround:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[■] Standard
[ ] Other
* SURCHARGE APPLIES

RI
[ ] Direct Exposure (Residential)
[ ] GW
[ ] Other

CT
[■] RCP Cert
[ ] GW Protection
[ ] SW Protection
[ ] GA Mobility
[■] GB Mobility
[■] Residential DEC
[ ] I/C DEC
[ ] Other

MA
[ ] MCP Certification
[ ] GW-1
[ ] GW-2
[ ] GW-3
[ ] S-1
[ ] S-2
[ ] S-3
[ ] MWRA eSMART
[ ] Other

State where samples were collected: CT

Data Format
[■] Excel
[■] PDF
[ ] GIS/Key
[ ] EQuIS
[■] Other (geotech)

Data Package
[ ] Tier II Checklist
[ ] Full Data Package*
[■] Phoenix Std Report
[ ] Other
* SURCHARGE APPLIES

The Connecticut Light and Power Company
d/b/a Eversource Energy
Docket No. 26-05-10
Date Issued September 29, 2026
RSR-032 Attachment 17
Page 760 of 1282

Client Services

From: Lynn E. Willey <LEWilley@tighebond.com>
Sent: Wednesday, October 17, 2018 11:31 AM
To: Client Services
Cc: Benjamin P. Caswell
Subject: RE: Phoenix Labs - GCB72216, ROCKVILLE MGP - COC Acknowledgement
Attachments: Sample Acknowledgement.pdf

Hi there Phoenix:

Please active

CB72216	SB-66 (17-19 FT)

Thank you.

Lynn E. Willey, P.G., LEP | Senior Environmental Scientist
Tighe & Bond | 213 Court Street Suite 1100 | Middletown, CT 06457
| 860.852.5214 | 860-729-7502 (cell)
www.tighebond.com | Follow us on: Twitter Facebook LinkedIn



From: Client Services <clientservices@phoenixlabs.com>
Sent: Tuesday, October 16, 2018 6:58 PM
To: Lynn E. Willey <LEWilley@tighebond.com>
Subject: Phoenix Labs - GCB72216, ROCKVILLE MGP - COC Acknowledgement

Lynn,

Please email client services only if you have a Price Quote# for this SDG, a Quote# was not listed on the COC.

Purchase Order#:14-0755-44B

GCB72216 Criteria:
SOIL(3): CT GBM (GB Mobility), CT RC (Res. Criteria)

Please email client services only if you require criteria different than what is listed.

Delivery group GCB72216 (ROCKVILLE MGP) has been logged in for the following samples:

Phoenix Id	Client Id
CB72216	SB-66 (17-19 FT)
CB72217	SB-66 (27-29 FT)
CB72218	SB-67 (23-25 FT)

The samples in this delivery group were received at 2.6°C. (Note acceptance criteria for relevant matrices is above freezing up to 6°C)

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

Phoenix Environmental Laboratories, Inc.
587 East Middle Turnpike
P.O. Box 370
Manchester, CT 06374
Tel. (860) 645-1102
Fax. (860) 645-0823
www.phoenixlabs.com

Please do not reply to this email.

2018

SEDIMENT LABORATORY

ANALYTICAL DATA

PHOENIX
Environmental Laboratories, Inc.

Friday, September 07, 2018

Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Project ID: ROCKVILLE MGP
Sample ID#s: CB20634 - CB20640

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 have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

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

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

Analysis Report

September 07, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SEDIMENT	Collected by:		08/28/18	14:40
Location Code:	TIGHE-DAS	Received by:	CP	08/28/18	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	E-0755-44B				

Laboratory Data

SDG ID: GCB20634
Phoenix ID: CB20634

Project ID: ROCKVILLE MGP
Client ID: SED-07

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.36	0.36	mg/Kg	1	08/29/18	TH	SW6010C
Arsenic	< 0.73	0.73	mg/Kg	1	08/29/18	TH	SW6010C
Barium	30.3	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Beryllium	< 0.29	0.29	mg/Kg	1	08/29/18	TH	SW6010C
Cadmium	< 0.36	0.36	mg/Kg	1	08/29/18	TH	SW6010C
Chromium	7.1	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Copper	13.2	7.3	mg/kg	10	08/29/18	CPP	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	08/29/18	RS	SW7471B
Nickel	7.6	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Lead	43.7	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Antimony	< 3.6	3.6	mg/Kg	1	08/29/18	TH	SW6010C
Selenium	< 1.5	1.5	mg/Kg	1	08/29/18	TH	SW6010C
Thallium	< 3.3	3.3	mg/Kg	1	08/29/18	TH	SW6010C
Vanadium	16.0	3.6	mg/Kg	10	08/29/18	CPP	SW6010C
Zinc	57.9	7.3	mg/Kg	10	08/29/18	CPP	SW6010C
Percent Solid	81		%		08/28/18	AK	SW846-%Solid
Soil Extraction for PCB	Completed				08/28/18	BA/V	SW3545A
Soil Extraction for SVOA	Completed				08/28/18	BA/CKV	SW3545A
Extraction of CT ETPH	Completed				08/29/18	BA/VCK	SW3545A
Mercury Digestion	Completed				08/29/18	I/Q	SW7471B
Total Metals Digest	Completed				08/28/18	L/AG/BF	SW3050B
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	91	60	mg/Kg	1	08/30/18	JRB	CTETPH 8015D
Identification	**		mg/Kg	1	08/30/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	65		%	1	08/30/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SED-07

Phoenix I.D.: CB20634

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Polychlorinated Biphenyls							
PCB-1016	ND	400	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1221	ND	400	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1232	ND	400	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1242	ND	400	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1248	ND	400	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1254	ND	400	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1260	ND	400	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1262	ND	400	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1268	ND	400	ug/Kg	10	08/30/18	AW	SW8082A
QA/QC Surrogates							
% DCBP	91		%	10	08/30/18	AW	30 - 150 %
% TCMX	88		%	10	08/30/18	AW	30 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.7	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloroethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloroethene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloropropene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dibromoethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichloroethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichloropropane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,3-Dichloropropane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
2,2-Dichloropropane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
2-Chlorotoluene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
2-Hexanone	ND	31	ug/Kg	1	08/29/18	JLI	SW8260C
2-Isopropyltoluene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
4-Chlorotoluene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	31	ug/Kg	1	08/29/18	JLI	SW8260C
Acetone	ND	310	ug/Kg	1	08/29/18	JLI	SW8260C
Acrylonitrile	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Benzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Bromobenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Bromochloromethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Bromodichloromethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Bromoform	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Bromomethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SED-07
Phoenix I.D.: CB20634

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Carbon Disulfide	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Carbon tetrachloride	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Chlorobenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Chloroethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Chloroform	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Chloromethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Dibromochloromethane	ND	3.7	ug/Kg	1	08/29/18	JLI	SW8260C
Dibromomethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Dichlorodifluoromethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Ethylbenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Hexachlorobutadiene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Isopropylbenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
m&p-Xylene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	37	ug/Kg	1	08/29/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	12	ug/Kg	1	08/29/18	JLI	SW8260C
Methylene chloride	ND	12	ug/Kg	1	08/29/18	JLI	SW8260C
Naphthalene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
n-Butylbenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
n-Propylbenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
o-Xylene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
p-Isopropyltoluene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
sec-Butylbenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Styrene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
tert-Butylbenzene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Tetrachloroethene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	12	ug/Kg	1	08/29/18	JLI	SW8260C
Toluene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Total Xylenes	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	12	ug/Kg	1	08/29/18	JLI	SW8260C
Trichloroethene	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Trichlorofluoromethane	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	12	ug/Kg	1	08/29/18	JLI	SW8260C
Vinyl chloride	ND	6.2	ug/Kg	1	08/29/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	95		%	1	08/29/18	JLI	70 - 130 %
% Bromofluorobenzene	97		%	1	08/29/18	JLI	70 - 130 %
% Dibromofluoromethane	103		%	1	08/29/18	JLI	70 - 130 %
% Toluene-d8	89		%	1	08/29/18	JLI	70 - 130 %
Semivolatiles							
1,2,4,5-Tetrachlorobenzene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
1,2,4-Trichlorobenzene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
1,2-Dichlorobenzene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
1,2-Diphenylhydrazine	ND	400	ug/Kg	1	08/29/18	KCA	SW8270D
1,3-Dichlorobenzene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
1,4-Dichlorobenzene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SED-07

Phoenix I.D.: CB20634

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,4,5-Trichlorophenol	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
2,4,6-Trichlorophenol	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
2,4-Dichlorophenol	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
2,4-Dimethylphenol	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
2,4-Dinitrophenol	ND	400	ug/Kg	1	08/29/18	KCA	SW8270D
2,4-Dinitrotoluene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
2,6-Dinitrotoluene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
2-Chloronaphthalene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
2-Chlorophenol	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
2-Methylnaphthalene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
2-Nitroaniline	ND	400	ug/Kg	1	08/29/18	KCA	SW8270D
2-Nitrophenol	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	400	ug/Kg	1	08/29/18	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
3-Nitroaniline	ND	400	ug/Kg	1	08/29/18	KCA	SW8270D
4,6-Dinitro-2-methylphenol	ND	400	ug/Kg	1	08/29/18	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	400	ug/Kg	1	08/29/18	KCA	SW8270D
4-Chloro-3-methylphenol	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
4-Chloroaniline	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
4-Nitroaniline	ND	650	ug/Kg	1	08/29/18	KCA	SW8270D
4-Nitrophenol	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Acenaphthene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Acenaphthylene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Acetophenone	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Aniline	ND	400	ug/Kg	1	08/29/18	KCA	SW8270D
Anthracene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Benz(a)anthracene	700	280	ug/Kg	1	08/29/18	KCA	SW8270D
Benzidine	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(a)pyrene	770	280	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(b)fluoranthene	1200	280	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(ghi)perylene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(k)fluoranthene	420	280	ug/Kg	1	08/29/18	KCA	SW8270D
Benzoic acid	ND	810	ug/Kg	1	08/29/18	KCA	SW8270D
Benzyl butyl phthalate	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	400	ug/Kg	1	08/29/18	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Bis(2-ethylhexyl)phthalate	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Carbazole	ND	400	ug/Kg	1	08/29/18	KCA	SW8270D
Chrysene	790	280	ug/Kg	1	08/29/18	KCA	SW8270D
Dibenz(a,h)anthracene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Dibenzofuran	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Diethyl phthalate	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Dimethylphthalate	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Di-n-butylphthalate	ND	400	ug/Kg	1	08/29/18	KCA	SW8270D
Di-n-octylphthalate	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Fluoranthene	1600	280	ug/Kg	1	08/29/18	KCA	SW8270D

Project ID: ROCKVILLE MGP
Client ID: SED-07

Phoenix I.D.: CB20634

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Fluorene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Hexachlorobenzene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Hexachlorobutadiene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Hexachlorocyclopentadiene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Hexachloroethane	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Isophorone	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Naphthalene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Nitrobenzene	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
N-Nitrosodimethylamine	ND	400	ug/Kg	1	08/29/18	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
N-Nitrosodiphenylamine	ND	400	ug/Kg	1	08/29/18	KCA	SW8270D
Pentachloronitrobenzene	ND	400	ug/Kg	1	08/29/18	KCA	SW8270D
Pentachlorophenol	ND	400	ug/Kg	1	08/29/18	KCA	SW8270D
Phenanthrene	1200	280	ug/Kg	1	08/29/18	KCA	SW8270D
Phenol	ND	280	ug/Kg	1	08/29/18	KCA	SW8270D
Pyrene	1500	280	ug/Kg	1	08/29/18	KCA	SW8270D
Pyridine	ND	400	ug/Kg	1	08/29/18	KCA	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	88		%	1	08/29/18	KCA	30 - 130 %
% 2-Fluorobiphenyl	68		%	1	08/29/18	KCA	30 - 130 %
% 2-Fluorophenol	61		%	1	08/29/18	KCA	30 - 130 %
% Nitrobenzene-d5	58		%	1	08/29/18	KCA	30 - 130 %
% Phenol-d5	67		%	1	08/29/18	KCA	30 - 130 %
% Terphenyl-d14	69		%	1	08/29/18	KCA	30 - 130 %
Field Extraction	Completed				08/28/18		SW5035A

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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C14 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

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

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
September 07, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

September 07, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SEDIMENT	Collected by:		08/28/18	14:25
Location Code:	TIGHE-DAS	Received by:	CP	08/28/18	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	E-0755-44B				

Laboratory Data

SDG ID: GCB20634
Phoenix ID: CB20635

Project ID: ROCKVILLE MGP
Client ID: SED-08

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.43	0.43	mg/Kg	1	08/29/18	TH	SW6010C
Arsenic	< 0.85	0.85	mg/Kg	1	08/29/18	TH	SW6010C
Barium	23.7	0.43	mg/Kg	1	08/29/18	TH	SW6010C
Beryllium	< 0.34	0.34	mg/Kg	1	08/29/18	TH	SW6010C
Cadmium	< 0.43	0.43	mg/Kg	1	08/29/18	TH	SW6010C
Chromium	6.61	0.43	mg/Kg	1	08/29/18	TH	SW6010C
Copper	10.0	0.9	mg/kg	1	08/29/18	TH	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	08/29/18	RS	SW7471B
Nickel	6.37	0.43	mg/Kg	1	08/29/18	TH	SW6010C
Lead	22.2	0.43	mg/Kg	1	08/29/18	TH	SW6010C
Antimony	< 4.3	4.3	mg/Kg	1	08/29/18	TH	SW6010C
Selenium	< 1.7	1.7	mg/Kg	1	08/29/18	TH	SW6010C
Thallium	< 3.8	3.8	mg/Kg	1	08/29/18	TH	SW6010C
Vanadium	15.2	0.43	mg/Kg	1	08/29/18	TH	SW6010C
Zinc	45.5	0.9	mg/Kg	1	08/29/18	TH	SW6010C
Percent Solid	76		%		08/28/18	AK	SW846-%Solid
Soil Extraction for PCB	Completed				08/28/18	BA/V	SW3545A
Soil Extraction for SVOA	Completed				08/28/18	BA/CKV	SW3545A
Extraction of CT ETPH	Completed				08/29/18	BA/VCK	SW3545A
Mercury Digestion	Completed				08/29/18	I/Q	SW7471B
Total Metals Digest	Completed				08/28/18	L/AG/BF	SW3050B
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	100	64	mg/Kg	1	08/30/18	JRB	CTETPH 8015D
Identification	**		mg/Kg	1	08/30/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	64		%	1	08/30/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SED-08

Phoenix I.D.: CB20635

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Polychlorinated Biphenyls							
PCB-1016	ND	430	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1221	ND	430	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1232	ND	430	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1242	ND	430	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1248	ND	430	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1254	ND	430	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1260	ND	430	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1262	ND	430	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1268	ND	430	ug/Kg	10	08/30/18	AW	SW8082A
QA/QC Surrogates							
% DCBP	81		%	10	08/30/18	AW	30 - 150 %
% TCMX	80		%	10	08/30/18	AW	30 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloroethane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloroethene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloropropene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dibromoethane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichloroethane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichloropropane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,3-Dichloropropane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
2,2-Dichloropropane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
2-Chlorotoluene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
2-Hexanone	ND	30	ug/Kg	1	08/29/18	JLI	SW8260C
2-Isopropyltoluene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
4-Chlorotoluene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	30	ug/Kg	1	08/29/18	JLI	SW8260C
Acetone	ND	300	ug/Kg	1	08/29/18	JLI	SW8260C
Acrylonitrile	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Benzene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Bromobenzene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Bromochloromethane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Bromodichloromethane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Bromoform	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Bromomethane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SED-08

Phoenix I.D.: CB20635

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Carbon Disulfide	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Carbon tetrachloride	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Chlorobenzene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Chloroethane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Chloroform	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Chloromethane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Dibromochloromethane	ND	3.6	ug/Kg	1	08/29/18	JLI	SW8260C
Dibromomethane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Dichlorodifluoromethane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Ethylbenzene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Hexachlorobutadiene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Isopropylbenzene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
m&p-Xylene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	36	ug/Kg	1	08/29/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	12	ug/Kg	1	08/29/18	JLI	SW8260C
Methylene chloride	ND	12	ug/Kg	1	08/29/18	JLI	SW8260C
Naphthalene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
n-Butylbenzene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
n-Propylbenzene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
o-Xylene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
p-Isopropyltoluene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
sec-Butylbenzene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Styrene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
tert-Butylbenzene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Tetrachloroethene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	12	ug/Kg	1	08/29/18	JLI	SW8260C
Toluene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Total Xylenes	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	12	ug/Kg	1	08/29/18	JLI	SW8260C
Trichloroethene	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Trichlorofluoromethane	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	12	ug/Kg	1	08/29/18	JLI	SW8260C
Vinyl chloride	ND	6.1	ug/Kg	1	08/29/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	08/29/18	JLI	70 - 130 %
% Bromofluorobenzene	94		%	1	08/29/18	JLI	70 - 130 %
% Dibromofluoromethane	106		%	1	08/29/18	JLI	70 - 130 %
% Toluene-d8	90		%	1	08/29/18	JLI	70 - 130 %
Semivolatiles							
1,2,4,5-Tetrachlorobenzene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
1,2,4-Trichlorobenzene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
1,2-Dichlorobenzene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
1,2-Diphenylhydrazine	ND	440	ug/Kg	1	08/29/18	KCA	SW8270D
1,3-Dichlorobenzene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
1,4-Dichlorobenzene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SED-08

Phoenix I.D.: CB20635

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,4,5-Trichlorophenol	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
2,4,6-Trichlorophenol	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
2,4-Dichlorophenol	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
2,4-Dimethylphenol	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
2,4-Dinitrophenol	ND	440	ug/Kg	1	08/29/18	KCA	SW8270D
2,4-Dinitrotoluene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
2,6-Dinitrotoluene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
2-Chloronaphthalene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
2-Chlorophenol	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
2-Methylnaphthalene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
2-Nitroaniline	ND	440	ug/Kg	1	08/29/18	KCA	SW8270D
2-Nitrophenol	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	440	ug/Kg	1	08/29/18	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
3-Nitroaniline	ND	440	ug/Kg	1	08/29/18	KCA	SW8270D
4,6-Dinitro-2-methylphenol	ND	440	ug/Kg	1	08/29/18	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	440	ug/Kg	1	08/29/18	KCA	SW8270D
4-Chloro-3-methylphenol	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
4-Chloroaniline	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
4-Nitroaniline	ND	700	ug/Kg	1	08/29/18	KCA	SW8270D
4-Nitrophenol	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Acenaphthene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Acenaphthylene	330	300	ug/Kg	1	08/29/18	KCA	SW8270D
Acetophenone	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Aniline	ND	440	ug/Kg	1	08/29/18	KCA	SW8270D
Anthracene	600	300	ug/Kg	1	08/29/18	KCA	SW8270D
Benz(a)anthracene	2400	300	ug/Kg	1	08/29/18	KCA	SW8270D
Benzidine	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(a)pyrene	2400	300	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(b)fluoranthene	4100	300	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(ghi)perylene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(k)fluoranthene	1400	300	ug/Kg	1	08/29/18	KCA	SW8270D
Benzoic acid	ND	870	ug/Kg	1	08/29/18	KCA	SW8270D
Benzyl butyl phthalate	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	440	ug/Kg	1	08/29/18	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Bis(2-ethylhexyl)phthalate	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Carbazole	ND	440	ug/Kg	1	08/29/18	KCA	SW8270D
Chrysene	2600	300	ug/Kg	1	08/29/18	KCA	SW8270D
Dibenz(a,h)anthracene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Dibenzofuran	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Diethyl phthalate	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Dimethylphthalate	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Di-n-butylphthalate	ND	440	ug/Kg	1	08/29/18	KCA	SW8270D
Di-n-octylphthalate	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Fluoranthene	5200	300	ug/Kg	1	08/29/18	KCA	SW8270D

Project ID: ROCKVILLE MGP
Client ID: SED-08

Phoenix I.D.: CB20635

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Fluorene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Hexachlorobenzene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Hexachlorobutadiene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Hexachlorocyclopentadiene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Hexachloroethane	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	440	300	ug/Kg	1	08/29/18	KCA	SW8270D
Isophorone	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Naphthalene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Nitrobenzene	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
N-Nitrosodimethylamine	ND	440	ug/Kg	1	08/29/18	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
N-Nitrosodiphenylamine	ND	440	ug/Kg	1	08/29/18	KCA	SW8270D
Pentachloronitrobenzene	ND	440	ug/Kg	1	08/29/18	KCA	SW8270D
Pentachlorophenol	ND	440	ug/Kg	1	08/29/18	KCA	SW8270D
Phenanthrene	2800	300	ug/Kg	1	08/29/18	KCA	SW8270D
Phenol	ND	300	ug/Kg	1	08/29/18	KCA	SW8270D
Pyrene	4300	300	ug/Kg	1	08/29/18	KCA	SW8270D
Pyridine	ND	440	ug/Kg	1	08/29/18	KCA	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	84		%	1	08/29/18	KCA	30 - 130 %
% 2-Fluorobiphenyl	62		%	1	08/29/18	KCA	30 - 130 %
% 2-Fluorophenol	63		%	1	08/29/18	KCA	30 - 130 %
% Nitrobenzene-d5	57		%	1	08/29/18	KCA	30 - 130 %
% Phenol-d5	67		%	1	08/29/18	KCA	30 - 130 %
% Terphenyl-d14	57		%	1	08/29/18	KCA	30 - 130 %
Field Extraction	Completed				08/28/18		SW5035A

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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C14 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

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

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
September 07, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Ver 1

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

Analysis Report

September 07, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SEDIMENT	Collected by:		08/28/18	15:10
Location Code:	TIGHE-DAS	Received by:	CP	08/28/18	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	E-0755-44B				

Laboratory Data

SDG ID: GCB20634
Phoenix ID: CB20636

Project ID: ROCKVILLE MGP
Client ID: SED-09

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 2.2	2.2	mg/Kg	1	08/29/18	TH	SW6010C
Arsenic	7.3	4.4	mg/Kg	1	08/29/18	TH	SW6010C
Barium	324	2.2	mg/Kg	1	08/29/18	TH	SW6010C
Beryllium	< 1.8	1.8	mg/Kg	1	08/29/18	TH	SW6010C
Cadmium	2.9	2.2	mg/Kg	1	08/29/18	TH	SW6010C
Chromium	66.4	2.2	mg/Kg	1	08/29/18	TH	SW6010C
Copper	149	4.4	mg/kg	1	08/29/18	TH	SW6010C
Mercury	0.21	0.17	mg/Kg	1	08/29/18	RS	SW7471B
Nickel	41.6	2.2	mg/Kg	1	08/29/18	TH	SW6010C
Lead	267	2.2	mg/Kg	1	08/29/18	TH	SW6010C
Antimony	< 22	22	mg/Kg	1	08/29/18	TH	SW6010C
Selenium	< 8.9	8.9	mg/Kg	1	08/29/18	TH	SW6010C
Thallium	< 20	20	mg/Kg	1	08/29/18	TH	SW6010C
Vanadium	109	2.2	mg/Kg	1	08/29/18	TH	SW6010C
Zinc	606	4.4	mg/Kg	1	08/29/18	TH	SW6010C
Percent Solid	15		%		08/28/18	AK	SW846-%Solid
Soil Extraction for PCB	Completed				08/28/18	BA/V	SW3545A
Soil Extraction for SVOA	Completed				08/28/18	BA/CKV	SW3545A
Extraction of CT ETPH	Completed				08/29/18	BA/VCK	SW3545A
Mercury Digestion	Completed				08/29/18	I/Q	SW7471B
Total Metals Digest	Completed				08/28/18	L/AG/BF	SW3050B
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	630	320	mg/Kg	1	08/30/18	JRB	CTETPH 8015D
Identification	**		mg/Kg	1	08/30/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	51		%	1	08/30/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SED-09

Phoenix I.D.: CB20636

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Polychlorinated Biphenyls							
PCB-1016	ND	430	ug/Kg	2	08/31/18	AW	SW8082A
PCB-1221	ND	430	ug/Kg	2	08/31/18	AW	SW8082A
PCB-1232	ND	430	ug/Kg	2	08/31/18	AW	SW8082A
PCB-1242	ND	430	ug/Kg	2	08/31/18	AW	SW8082A
PCB-1248	ND	430	ug/Kg	2	08/31/18	AW	SW8082A
PCB-1254	ND	430	ug/Kg	2	08/31/18	AW	SW8082A
PCB-1260	ND	430	ug/Kg	2	08/31/18	AW	SW8082A
PCB-1262	ND	430	ug/Kg	2	08/31/18	AW	SW8082A
PCB-1268	ND	430	ug/Kg	2	08/31/18	AW	SW8082A
QA/QC Surrogates							
% DCBP	55		%	2	08/31/18	AW	30 - 150 %
% TCMX	58		%	2	08/31/18	AW	30 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	20	ug/Kg	1	08/30/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,1-Dichloroethane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,1-Dichloroethene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,1-Dichloropropene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,2-Dibromoethane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,2-Dichloroethane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,2-Dichloropropane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,3-Dichloropropane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
2,2-Dichloropropane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
2-Chlorotoluene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
2-Hexanone	ND	160	ug/Kg	1	08/30/18	JLI	SW8260C
2-Isopropyltoluene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
4-Chlorotoluene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	160	ug/Kg	1	08/30/18	JLI	SW8260C
Acetone	ND	1600	ug/Kg	1	08/30/18	JLI	SW8260C
Acrylonitrile	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Benzene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Bromobenzene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Bromochloromethane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Bromodichloromethane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Bromoform	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Bromomethane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C

Project ID: ROCKVILLE MGP
Client ID: SED-09

Phoenix I.D.: CB20636

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Carbon Disulfide	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Carbon tetrachloride	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Chlorobenzene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Chloroethane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Chloroform	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Chloromethane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Dibromochloromethane	ND	20	ug/Kg	1	08/30/18	JLI	SW8260C
Dibromomethane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Dichlorodifluoromethane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Ethylbenzene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Hexachlorobutadiene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Isopropylbenzene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
m&p-Xylene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	200	ug/Kg	1	08/30/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	65	ug/Kg	1	08/30/18	JLI	SW8260C
Methylene chloride	ND	65	ug/Kg	1	08/30/18	JLI	SW8260C
Naphthalene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
n-Butylbenzene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
n-Propylbenzene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
o-Xylene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
p-Isopropyltoluene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
sec-Butylbenzene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Styrene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
tert-Butylbenzene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Tetrachloroethene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	65	ug/Kg	1	08/30/18	JLI	SW8260C
Toluene	240	33	ug/Kg	1	08/30/18	JLI	SW8260C
Total Xylenes	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	65	ug/Kg	1	08/30/18	JLI	SW8260C
Trichloroethene	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Trichlorofluoromethane	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	65	ug/Kg	1	08/30/18	JLI	SW8260C
Vinyl chloride	ND	33	ug/Kg	1	08/30/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	95		%	1	08/30/18	JLI	70 - 130 %
% Bromofluorobenzene	89		%	1	08/30/18	JLI	70 - 130 %
% Dibromofluoromethane	90		%	1	08/30/18	JLI	70 - 130 %
% Toluene-d8	102		%	1	08/30/18	JLI	70 - 130 %
Semivolatiles							
1,2,4,5-Tetrachlorobenzene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
1,2,4-Trichlorobenzene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
1,2-Dichlorobenzene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
1,2-Diphenylhydrazine	ND	2200	ug/Kg	1	08/29/18	KCA	SW8270D
1,3-Dichlorobenzene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
1,4-Dichlorobenzene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SED-09

Phoenix I.D.: CB20636

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,4,5-Trichlorophenol	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
2,4,6-Trichlorophenol	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
2,4-Dichlorophenol	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
2,4-Dimethylphenol	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
2,4-Dinitrophenol	ND	2200	ug/Kg	1	08/29/18	KCA	SW8270D
2,4-Dinitrotoluene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
2,6-Dinitrotoluene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
2-Chloronaphthalene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
2-Chlorophenol	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
2-Methylnaphthalene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
2-Nitroaniline	ND	2200	ug/Kg	1	08/29/18	KCA	SW8270D
2-Nitrophenol	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	2200	ug/Kg	1	08/29/18	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
3-Nitroaniline	ND	2200	ug/Kg	1	08/29/18	KCA	SW8270D
4,6-Dinitro-2-methylphenol	ND	2200	ug/Kg	1	08/29/18	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	2200	ug/Kg	1	08/29/18	KCA	SW8270D
4-Chloro-3-methylphenol	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
4-Chloroaniline	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
4-Nitroaniline	ND	3500	ug/Kg	1	08/29/18	KCA	SW8270D
4-Nitrophenol	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Acenaphthene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Acenaphthylene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Acetophenone	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Aniline	ND	2200	ug/Kg	1	08/29/18	KCA	SW8270D
Anthracene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Benz(a)anthracene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Benzidine	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(a)pyrene	1900	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(b)fluoranthene	3700	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(ghi)perylene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(k)fluoranthene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Benzoic acid	ND	4400	ug/Kg	1	08/29/18	KCA	SW8270D
Benzyl butyl phthalate	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	2200	ug/Kg	1	08/29/18	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Bis(2-ethylhexyl)phthalate	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Carbazole	ND	2200	ug/Kg	1	08/29/18	KCA	SW8270D
Chrysene	2200	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Dibenz(a,h)anthracene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Dibenzofuran	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Diethyl phthalate	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Dimethylphthalate	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Di-n-butylphthalate	ND	2200	ug/Kg	1	08/29/18	KCA	SW8270D
Di-n-octylphthalate	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Fluoranthene	3600	1500	ug/Kg	1	08/29/18	KCA	SW8270D

Project ID: ROCKVILLE MGP
Client ID: SED-09

Phoenix I.D.: CB20636

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Fluorene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Hexachlorobenzene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Hexachlorobutadiene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Hexachlorocyclopentadiene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Hexachloroethane	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Isophorone	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Naphthalene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Nitrobenzene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
N-Nitrosodimethylamine	ND	2200	ug/Kg	1	08/29/18	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
N-Nitrosodiphenylamine	ND	2200	ug/Kg	1	08/29/18	KCA	SW8270D
Pentachloronitrobenzene	ND	2200	ug/Kg	1	08/29/18	KCA	SW8270D
Pentachlorophenol	ND	2200	ug/Kg	1	08/29/18	KCA	SW8270D
Phenanthrene	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Phenol	ND	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Pyrene	3200	1500	ug/Kg	1	08/29/18	KCA	SW8270D
Pyridine	ND	2200	ug/Kg	1	08/29/18	KCA	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	68		%	1	08/29/18	KCA	30 - 130 %
% 2-Fluorobiphenyl	46		%	1	08/29/18	KCA	30 - 130 %
% 2-Fluorophenol	51		%	1	08/29/18	KCA	30 - 130 %
% Nitrobenzene-d5	46		%	1	08/29/18	KCA	30 - 130 %
% Phenol-d5	55		%	1	08/29/18	KCA	30 - 130 %
% Terphenyl-d14	39		%	1	08/29/18	KCA	30 - 130 %
Field Extraction	Completed				08/28/18		SW5035A

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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C16 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

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

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
September 07, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

September 07, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SEDIMENT	Collected by:		08/28/18	15:45
Location Code:	TIGHE-DAS	Received by:	CP	08/28/18	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	E-0755-44B				

Laboratory Data

SDG ID: GCB20634
Phoenix ID: CB20637

Project ID: ROCKVILLE MGP
Client ID: SED-06A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Copper	22.1	0.7	mg/kg	1	08/29/18	TH	SW6010C
Percent Solid	87		%		08/28/18	AK	SW846-%Solid
Total Metals Digest	Completed				08/28/18	L/AG/BF	SW3050B

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

Comments:

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

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Phyllis Shiller, Laboratory Director
September 07, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

September 07, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SEDIMENT	Collected by:		08/28/18	15:50
Location Code:	TIGHE-DAS	Received by:	CP	08/28/18	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	E-0755-44B				

Laboratory Data

SDG ID: GCB20634
Phoenix ID: CB20638

Project ID: ROCKVILLE MGP
Client ID: SED-06B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Copper	28.9	1.0	mg/kg	1	08/29/18	TH	SW6010C
Percent Solid	73		%		08/28/18	AK	SW846-%Solid
Total Metals Digest	Completed				08/28/18	L/AG/BF	SW3050B

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

Comments:

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

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
September 07, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

September 07, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SEDIMENT	Collected by:		08/28/18	15:55
Location Code:	TIGHE-DAS	Received by:	CP	08/28/18	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	E-0755-44B				

Laboratory Data

SDG ID: GCB20634
Phoenix ID: CB20639

Project ID: ROCKVILLE MGP
Client ID: SED-06C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Copper	83.7	0.7	mg/kg	1	08/29/18	EK	SW6010C
Percent Solid	95		%		08/28/18	AK	SW846-%Solid
Total Metals Digest	Completed				08/28/18	L/AG/BF	SW3050B

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

Comments:

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

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
September 07, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

September 07, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SEDIMENT	Collected by:		08/28/18	8:00
Location Code:	TIGHE-DAS	Received by:	CP	08/28/18	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	E-0755-44B				

Laboratory Data

SDG ID: GCB20634
Phoenix ID: CB20640

Project ID: ROCKVILLE MGP
Client ID: SED-DUP-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.39	0.39	mg/Kg	1	08/29/18	TH	SW6010C
Arsenic	< 0.77	0.77	mg/Kg	1	08/29/18	TH	SW6010C
Barium	27.5	0.39	mg/Kg	1	08/29/18	TH	SW6010C
Beryllium	< 0.31	0.31	mg/Kg	1	08/29/18	TH	SW6010C
Cadmium	< 0.39	0.39	mg/Kg	1	08/29/18	TH	SW6010C
Chromium	7.83	0.39	mg/Kg	1	08/29/18	TH	SW6010C
Copper	9.5	0.8	mg/kg	1	08/29/18	TH	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	08/29/18	RS	SW7471B
Nickel	5.25	0.39	mg/Kg	1	08/29/18	TH	SW6010C
Lead	33.1	0.39	mg/Kg	1	08/29/18	TH	SW6010C
Antimony	< 3.9	3.9	mg/Kg	1	08/29/18	TH	SW6010C
Selenium	< 1.5	1.5	mg/Kg	1	08/29/18	TH	SW6010C
Thallium	< 3.5	3.5	mg/Kg	1	08/29/18	TH	SW6010C
Vanadium	16.6	0.39	mg/Kg	1	08/29/18	TH	SW6010C
Zinc	60.8	0.8	mg/Kg	1	08/29/18	TH	SW6010C
Percent Solid	79		%		08/28/18	AK	SW846-%Solid
Soil Extraction for PCB	Completed				08/28/18	BA/V	SW3545A
Soil Extraction for SVOA	Completed				08/28/18	BA/CKV	SW3545A
Extraction of CT ETPH	Completed				08/29/18	AA/VCK	SW3545A
Mercury Digestion	Completed				08/29/18	I/Q	SW7471B
Total Metals Digest	Completed				08/28/18	L/AG/BF	SW3050B
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	79	61	mg/Kg	1	08/30/18	JRB	CTETPH 8015D
Identification	**		mg/Kg	1	08/30/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	63		%	1	08/30/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SED-DUP-1

Phoenix I.D.: CB20640

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Polychlorinated Biphenyls							
PCB-1016	ND	410	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1221	ND	410	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1232	ND	410	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1242	ND	410	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1248	ND	410	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1254	ND	410	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1260	ND	410	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1262	ND	410	ug/Kg	10	08/30/18	AW	SW8082A
PCB-1268	ND	410	ug/Kg	10	08/30/18	AW	SW8082A
QA/QC Surrogates							
% DCBP	85		%	10	08/30/18	AW	30 - 150 %
% TCMX	85		%	10	08/30/18	AW	30 - 150 %
Volatiles							
1,1,1,2-Tetrachloroethane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	4.0	ug/Kg	1	08/29/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloroethane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloroethene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,1-Dichloropropene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dibromoethane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichloroethane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,2-Dichloropropane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,3-Dichloropropane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
2,2-Dichloropropane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
2-Chlorotoluene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
2-Hexanone	ND	33	ug/Kg	1	08/29/18	JLI	SW8260C
2-Isopropyltoluene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
4-Chlorotoluene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	33	ug/Kg	1	08/29/18	JLI	SW8260C
Acetone	ND	330	ug/Kg	1	08/29/18	JLI	SW8260C
Acrylonitrile	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Benzene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Bromobenzene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Bromochloromethane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Bromodichloromethane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Bromoform	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Bromomethane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SED-DUP-1

Phoenix I.D.: CB20640

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Carbon Disulfide	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Carbon tetrachloride	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Chlorobenzene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Chloroethane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Chloroform	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Chloromethane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Dibromochloromethane	ND	4.0	ug/Kg	1	08/29/18	JLI	SW8260C
Dibromomethane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Dichlorodifluoromethane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Ethylbenzene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Hexachlorobutadiene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Isopropylbenzene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
m&p-Xylene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	40	ug/Kg	1	08/29/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	13	ug/Kg	1	08/29/18	JLI	SW8260C
Methylene chloride	ND	13	ug/Kg	1	08/29/18	JLI	SW8260C
Naphthalene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
n-Butylbenzene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
n-Propylbenzene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
o-Xylene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
p-Isopropyltoluene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
sec-Butylbenzene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Styrene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
tert-Butylbenzene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Tetrachloroethene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/Kg	1	08/29/18	JLI	SW8260C
Toluene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Total Xylenes	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	13	ug/Kg	1	08/29/18	JLI	SW8260C
Trichloroethene	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Trichlorofluoromethane	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	13	ug/Kg	1	08/29/18	JLI	SW8260C
Vinyl chloride	ND	6.6	ug/Kg	1	08/29/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	95		%	1	08/29/18	JLI	70 - 130 %
% Bromofluorobenzene	97		%	1	08/29/18	JLI	70 - 130 %
% Dibromofluoromethane	112		%	1	08/29/18	JLI	70 - 130 %
% Toluene-d8	88		%	1	08/29/18	JLI	70 - 130 %
Semivolatiles							
1,2,4,5-Tetrachlorobenzene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
1,2,4-Trichlorobenzene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
1,2-Dichlorobenzene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
1,2-Diphenylhydrazine	ND	410	ug/Kg	1	08/29/18	KCA	SW8270D
1,3-Dichlorobenzene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
1,4-Dichlorobenzene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: SED-DUP-1

Phoenix I.D.: CB20640

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,4,5-Trichlorophenol	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
2,4,6-Trichlorophenol	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
2,4-Dichlorophenol	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
2,4-Dimethylphenol	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
2,4-Dinitrophenol	ND	410	ug/Kg	1	08/29/18	KCA	SW8270D
2,4-Dinitrotoluene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
2,6-Dinitrotoluene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
2-Chloronaphthalene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
2-Chlorophenol	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
2-Methylnaphthalene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
2-Nitroaniline	ND	410	ug/Kg	1	08/29/18	KCA	SW8270D
2-Nitrophenol	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	410	ug/Kg	1	08/29/18	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
3-Nitroaniline	ND	410	ug/Kg	1	08/29/18	KCA	SW8270D
4,6-Dinitro-2-methylphenol	ND	410	ug/Kg	1	08/29/18	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	410	ug/Kg	1	08/29/18	KCA	SW8270D
4-Chloro-3-methylphenol	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
4-Chloroaniline	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
4-Nitroaniline	ND	660	ug/Kg	1	08/29/18	KCA	SW8270D
4-Nitrophenol	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Acenaphthene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Acenaphthylene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Acetophenone	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Aniline	ND	410	ug/Kg	1	08/29/18	KCA	SW8270D
Anthracene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Benz(a)anthracene	710	290	ug/Kg	1	08/29/18	KCA	SW8270D
Benzidine	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(a)pyrene	840	290	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(b)fluoranthene	1400	290	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(ghi)perylene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Benzo(k)fluoranthene	530	290	ug/Kg	1	08/29/18	KCA	SW8270D
Benzoic acid	ND	820	ug/Kg	1	08/29/18	KCA	SW8270D
Benzyl butyl phthalate	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	410	ug/Kg	1	08/29/18	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Bis(2-ethylhexyl)phthalate	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Carbazole	ND	410	ug/Kg	1	08/29/18	KCA	SW8270D
Chrysene	840	290	ug/Kg	1	08/29/18	KCA	SW8270D
Dibenz(a,h)anthracene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Dibenzofuran	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Diethyl phthalate	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Dimethylphthalate	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Di-n-butylphthalate	ND	410	ug/Kg	1	08/29/18	KCA	SW8270D
Di-n-octylphthalate	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Fluoranthene	1700	290	ug/Kg	1	08/29/18	KCA	SW8270D

Project ID: ROCKVILLE MGP
Client ID: SED-DUP-1

Phoenix I.D.: CB20640

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Fluorene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Hexachlorobenzene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Hexachlorobutadiene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Hexachlorocyclopentadiene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Hexachloroethane	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Isophorone	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Naphthalene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Nitrobenzene	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
N-Nitrosodimethylamine	ND	410	ug/Kg	1	08/29/18	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
N-Nitrosodiphenylamine	ND	410	ug/Kg	1	08/29/18	KCA	SW8270D
Pentachloronitrobenzene	ND	410	ug/Kg	1	08/29/18	KCA	SW8270D
Pentachlorophenol	ND	410	ug/Kg	1	08/29/18	KCA	SW8270D
Phenanthrene	960	290	ug/Kg	1	08/29/18	KCA	SW8270D
Phenol	ND	290	ug/Kg	1	08/29/18	KCA	SW8270D
Pyrene	1600	290	ug/Kg	1	08/29/18	KCA	SW8270D
Pyridine	ND	410	ug/Kg	1	08/29/18	KCA	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	86		%	1	08/29/18	KCA	30 - 130 %
% 2-Fluorobiphenyl	66		%	1	08/29/18	KCA	30 - 130 %
% 2-Fluorophenol	63		%	1	08/29/18	KCA	30 - 130 %
% Nitrobenzene-d5	59		%	1	08/29/18	KCA	30 - 130 %
% Phenol-d5	68		%	1	08/29/18	KCA	30 - 130 %
% Terphenyl-d14	66		%	1	08/29/18	KCA	30 - 130 %
Field Extraction	Completed				08/28/18		SW5035A

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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

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

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
September 07, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Ver 1

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

September 07, 2018

QA/QC Data

SDG I.D.: GCB20634

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 445221 (mg/kg), QC Sample No: CB20630 (CB20634, CB20635, CB20636, CB20637, CB20638, CB20639, CB20640)														
ICP Metals - Soil														
Antimony	BRL	3.0	<3.4	<3.6	NC	96.6			81.1			75 - 125	30	
Arsenic	BRL	0.60	1.84	2.42	NC	102			89.7			75 - 125	30	
Barium	BRL	0.30	92.7	66.1	33.5	105			110			75 - 125	30	r
Beryllium	BRL	0.24	0.52	0.60	NC	106			95.7			75 - 125	30	
Cadmium	BRL	0.30	0.40	0.46	NC	101			93.7			75 - 125	30	
Chromium	BRL	0.30	11.8	14.9	23.2	111			95.7			75 - 125	30	
Copper	BRL	0.60	13.4	14.9	10.6	106			101			75 - 125	30	
Lead	BRL	0.30	1.30	2.30	NC	107			94.3			75 - 125	30	
Nickel	BRL	0.30	8.80	10.0	12.8	104			94.1			75 - 125	30	
Selenium	BRL	1.2	<1.4	<1.4	NC	81.8			98.1			75 - 125	30	
Silver	BRL	0.30	<0.34	<0.36	NC	101			91.3			75 - 125	30	
Thallium	BRL	2.7	<3.1	<3.2	NC	101			92.7			75 - 125	30	
Vanadium	BRL	0.30	49.3	53.0	7.20	117			107			75 - 125	30	
Zinc	BRL	0.60	54.9	58.6	6.50	101			95.7			75 - 125	30	
QA/QC Batch 445240 (mg/kg), QC Sample No: CB20641 (CB20634, CB20635, CB20636, CB20640)														
Mercury - Soil	BRL	0.03	0.25	0.22	12.8	83.1	83.4	0.4	93.7			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%.

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

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QA/QC Report

September 07, 2018

QA/QC Data

SDG I.D.: GCB20634

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 445080 (ug/Kg), QC Sample No: CB19799 2X (CB20634, CB20635, CB20636, CB20640)											
Polychlorinated Biphenyls - Sediment											
PCB-1016	ND	33	95	99	4.1	78	85	8.6	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	93	94	1.1	74	81	9.0	40 - 140	30	
PCB-1262	ND	33							40 - 140	30	
PCB-1268	ND	33							40 - 140	30	
% DCBP (Surrogate Rec)	87	%	105	112	6.5	83	90	8.1	30 - 150	30	
% TCMX (Surrogate Rec)	92	%	111	108	2.7	81	88	8.3	30 - 150	30	
QA/QC Batch 445176 (ug/kg), QC Sample No: CB20488 (CB20634, CB20635, CB20636, CB20640)											
Semivolatiles - Sediment											
1,2,4,5-Tetrachlorobenzene	ND	230	70	66	5.9	64	49	26.5	30 - 130	30	
1,2,4-Trichlorobenzene	ND	230	66	61	7.9	63	48	27.0	30 - 130	30	
1,2-Dichlorobenzene	ND	180	61	57	6.8	61	45	30.2	30 - 130	30	
1,2-Diphenylhydrazine	ND	230	82	79	3.7	73	55	28.1	30 - 130	30	
1,3-Dichlorobenzene	ND	230	59	55	7.0	61	44	32.4	30 - 130	30	r
1,4-Dichlorobenzene	ND	230	59	56	5.2	55	45	20.0	30 - 130	30	
2,4,5-Trichlorophenol	ND	230	81	76	6.4	74	55	29.5	30 - 130	30	
2,4,6-Trichlorophenol	ND	130	78	75	3.9	72	55	26.8	30 - 130	30	
2,4-Dichlorophenol	ND	130	75	71	5.5	65	54	18.5	30 - 130	30	
2,4-Dimethylphenol	ND	230	75	71	5.5	66	51	25.6	30 - 130	30	
2,4-Dinitrophenol	ND	230	11	14	24.0	30	25	18.2	30 - 130	30	l,m
2,4-Dinitrotoluene	ND	130	83	78	6.2	79	57	32.4	30 - 130	30	r
2,6-Dinitrotoluene	ND	130	84	78	7.4	77	57	29.9	30 - 130	30	
2-Chloronaphthalene	ND	230	73	69	5.6	70	52	29.5	30 - 130	30	
2-Chlorophenol	ND	230	67	64	4.6	55	49	11.5	30 - 130	30	
2-Methylnaphthalene	ND	230	68	65	4.5	64	49	26.5	30 - 130	30	
2-Methylphenol (o-cresol)	ND	230	70	67	4.4	67	48	33.0	30 - 130	30	r
2-Nitroaniline	ND	330	111	102	8.5	100	72	32.6	30 - 130	30	r
2-Nitrophenol	ND	230	71	67	5.8	62	52	17.5	30 - 130	30	
3&4-Methylphenol (m&p-cresol)	ND	230	73	70	4.2	64	51	22.6	30 - 130	30	
3,3'-Dichlorobenzidine	ND	130	76	69	9.7	67	43	43.6	30 - 130	30	r
3-Nitroaniline	ND	330	86	78	9.8	81	59	31.4	30 - 130	30	r
4,6-Dinitro-2-methylphenol	ND	230	24	33	31.6	49	40	20.2	30 - 130	30	l,r
4-Bromophenyl phenyl ether	ND	230	78	74	5.3	74	55	29.5	30 - 130	30	
4-Chloro-3-methylphenol	ND	230	80	74	7.8	67	55	19.7	30 - 130	30	
4-Chloroaniline	ND	230	73	64	13.1	64	52	20.7	30 - 130	30	
4-Chlorophenyl phenyl ether	ND	230	77	72	6.7	74	54	31.3	30 - 130	30	r
4-Nitroaniline	ND	230	79	74	6.5	72	55	26.8	30 - 130	30	

QA/QC Data

SDG I.D.: GCB20634

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
4-Nitrophenol	ND	230	85	80	6.1	81	59	31.4	30 - 130	30	r
Acenaphthene	ND	230	73	70	4.2	71	54	27.2	30 - 130	30	
Acenaphthylene	ND	130	71	67	5.8	68	51	28.6	30 - 130	30	
Acetophenone	ND	230	66	63	4.7	56	48	15.4	30 - 130	30	
Aniline	ND	330	65	58	11.4	47	39	18.6	30 - 130	30	
Anthracene	ND	230	75	72	4.1	73	55	28.1	30 - 130	30	
Benz(a)anthracene	ND	230	77	72	6.7	72	53	30.4	30 - 130	30	
Benzidine	ND	330	45	40	11.8	13	<10	NC	30 - 130	30	m
Benzo(a)pyrene	ND	130	76	71	6.8	71	52	30.9	30 - 130	30	r
Benzo(b)fluoranthene	ND	160	77	72	6.7	72	54	28.6	30 - 130	30	
Benzo(ghi)perylene	ND	230	79	78	1.3	69	53	26.2	30 - 130	30	
Benzo(k)fluoranthene	ND	230	81	74	9.0	75	56	29.0	30 - 130	30	
Benzoic Acid	ND	330	<10	<10	NC	38	22	53.3	30 - 130	30	l,m,r
Benzyl butyl phthalate	ND	230	82	80	2.5	80	61	27.0	30 - 130	30	
Bis(2-chloroethoxy)methane	ND	230	72	68	5.7	64	53	18.8	30 - 130	30	
Bis(2-chloroethyl)ether	ND	130	63	59	6.6	61	46	28.0	30 - 130	30	
Bis(2-chloroisopropyl)ether	ND	230	59	55	7.0	58	44	27.5	30 - 130	30	
Bis(2-ethylhexyl)phthalate	ND	230	84	81	3.6	79	60	27.3	30 - 130	30	
Carbazole	ND	230	77	73	5.3	71	55	25.4	30 - 130	30	
Chrysene	ND	230	79	75	5.2	74	55	29.5	30 - 130	30	
Dibenz(a,h)anthracene	ND	130	88	85	3.5	77	58	28.1	30 - 130	30	
Dibenzofuran	ND	230	75	70	6.9	70	52	29.5	30 - 130	30	
Diethyl phthalate	ND	230	77	72	6.7	74	55	29.5	30 - 130	30	
Dimethylphthalate	ND	230	77	73	5.3	72	55	26.8	30 - 130	30	
Di-n-butylphthalate	ND	670	77	74	4.0	73	57	24.6	30 - 130	30	
Di-n-octylphthalate	ND	230	83	78	6.2	74	57	26.0	30 - 130	30	
Fluoranthene	ND	230	75	70	6.9	72	54	28.6	30 - 130	30	
Fluorene	ND	230	76	72	5.4	74	54	31.3	30 - 130	30	r
Hexachlorobenzene	ND	130	78	74	5.3	73	55	28.1	30 - 130	30	
Hexachlorobutadiene	ND	230	66	62	6.3	62	48	25.5	30 - 130	30	
Hexachlorocyclopentadiene	ND	230	59	54	8.8	49	42	15.4	30 - 130	30	
Hexachloroethane	ND	130	60	56	6.9	58	45	25.2	30 - 130	30	
Indeno(1,2,3-cd)pyrene	ND	230	80	76	5.1	69	52	28.1	30 - 130	30	
Isophorone	ND	130	67	62	7.8	58	49	16.8	30 - 130	30	
Naphthalene	ND	230	61	59	3.3	61	47	25.9	30 - 130	30	
Nitrobenzene	ND	130	69	65	6.0	69	51	30.0	30 - 130	30	
N-Nitrosodimethylamine	ND	230	60	57	5.1	65	46	34.2	30 - 130	30	r
N-Nitrosodi-n-propylamine	ND	130	73	71	2.8	63	53	17.2	30 - 130	30	
N-Nitrosodiphenylamine	ND	130	78	72	8.0	71	52	30.9	30 - 130	30	r
Pentachloronitrobenzene	ND	230	77	72	6.7	71	52	30.9	30 - 130	30	r
Pentachlorophenol	ND	230	68	66	3.0	86	57	40.6	30 - 130	30	r
Phenanthrene	ND	130	74	71	4.1	71	54	27.2	30 - 130	30	
Phenol	ND	230	71	67	5.8	62	50	21.4	30 - 130	30	
Pyrene	ND	230	76	71	6.8	72	55	26.8	30 - 130	30	
Pyridine	ND	230	44	41	7.1	50	34	38.1	30 - 130	30	r
% 2,4,6-Tribromophenol	71	%	79	77	2.6	77	59	26.5	30 - 130	30	
% 2-Fluorobiphenyl	62	%	65	62	4.7	64	48	28.6	30 - 130	30	
% 2-Fluorophenol	57	%	63	59	6.6	65	46	34.2	30 - 130	30	r
% Nitrobenzene-d5	54	%	62	58	6.7	61	45	30.2	30 - 130	30	
% Phenol-d5	61	%	67	64	4.6	64	49	26.5	30 - 130	30	
% Terphenyl-d14	67	%	63	59	6.6	60	46	26.4	30 - 130	30	

QA/QC Data

SDG I.D.: GCB20634

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
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%)											
QA/QC Batch 445496 (ug/kg), QC Sample No: CB20635 (CB20634, CB20635, CB20640)											
Volatiles - Sediment											
1,1,1,2-Tetrachloroethane	ND	5.0	87	90	3.4	89	88	1.1	70 - 130	30	
1,1,1-Trichloroethane	ND	5.0	97	100	3.0	100	103	3.0	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	3.0	92	93	1.1	95	90	5.4	70 - 130	30	
1,1,2-Trichloroethane	ND	5.0	92	93	1.1	96	90	6.5	70 - 130	30	
1,1-Dichloroethane	ND	5.0	101	106	4.8	103	103	0.0	70 - 130	30	
1,1-Dichloroethene	ND	5.0	107	110	2.8	99	101	2.0	70 - 130	30	
1,1-Dichloropropene	ND	5.0	96	94	2.1	94	93	1.1	70 - 130	30	
1,2,3-Trichlorobenzene	ND	5.0	90	90	0.0	93	93	0.0	70 - 130	30	
1,2,3-Trichloropropane	ND	5.0	87	89	2.3	91	85	6.8	70 - 130	30	
1,2,4-Trichlorobenzene	ND	5.0	86	83	3.6	86	88	2.3	70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	87	88	1.1	90	88	2.2	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	100	97	3.0	87	90	3.4	70 - 130	30	
1,2-Dibromoethane	ND	5.0	88	89	1.1	89	87	2.3	70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	93	97	4.2	97	97	0.0	70 - 130	30	
1,2-Dichloroethane	ND	5.0	100	101	1.0	99	96	3.1	70 - 130	30	
1,2-Dichloropropane	ND	5.0	95	98	3.1	98	98	0.0	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	85	85	0.0	87	87	0.0	70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	87	90	3.4	90	90	0.0	70 - 130	30	
1,3-Dichloropropane	ND	5.0	85	87	2.3	86	85	1.2	70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	92	96	4.3	96	93	3.2	70 - 130	30	
2,2-Dichloropropane	ND	5.0	96	100	4.1	97	99	2.0	70 - 130	30	
2-Chlorotoluene	ND	5.0	88	91	3.4	89	88	1.1	70 - 130	30	
2-Hexanone	ND	25	82	86	4.8	82	78	5.0	70 - 130	30	
2-Isopropyltoluene	ND	5.0	95	98	3.1	99	98	1.0	70 - 130	30	
4-Chlorotoluene	ND	5.0	85	86	1.2	87	85	2.3	70 - 130	30	
4-Methyl-2-pentanone	ND	25	100	98	2.0	97	91	6.4	70 - 130	30	
Acetone	ND	10	79	81	2.5	69	62	10.7	70 - 130	30	m
Acrylonitrile	ND	5.0	104	105	1.0	106	104	1.9	70 - 130	30	
Benzene	ND	1.0	96	96	0.0	95	94	1.1	70 - 130	30	
Bromobenzene	ND	5.0	91	96	5.3	94	93	1.1	70 - 130	30	
Bromochloromethane	ND	5.0	90	96	6.5	97	97	0.0	70 - 130	30	
Bromodichloromethane	ND	5.0	95	96	1.0	94	94	0.0	70 - 130	30	
Bromoform	ND	5.0	79	83	4.9	80	79	1.3	70 - 130	30	
Bromomethane	ND	5.0	104	110	5.6	98	106	7.8	70 - 130	30	
Carbon Disulfide	ND	5.0	104	108	3.8	103	106	2.9	70 - 130	30	
Carbon tetrachloride	ND	5.0	93	97	4.2	95	96	1.0	70 - 130	30	
Chlorobenzene	ND	5.0	92	92	0.0	95	92	3.2	70 - 130	30	
Chloroethane	ND	5.0	115	120	4.3	77	78	1.3	70 - 130	30	
Chloroform	ND	5.0	91	94	3.2	91	91	0.0	70 - 130	30	
Chloromethane	ND	5.0	96	97	1.0	99	97	2.0	70 - 130	30	
cis-1,2-Dichloroethene	ND	5.0	98	101	3.0	105	105	0.0	70 - 130	30	
cis-1,3-Dichloropropene	ND	5.0	98	97	1.0	97	94	3.1	70 - 130	30	
Dibromochloromethane	ND	3.0	90	94	4.3	90	90	0.0	70 - 130	30	
Dibromomethane	ND	5.0	98	97	1.0	97	94	3.1	70 - 130	30	
Dichlorodifluoromethane	ND	5.0	89	80	10.7	81	77	5.1	70 - 130	30	
Ethylbenzene	ND	1.0	87	90	3.4	90	89	1.1	70 - 130	30	
Hexachlorobutadiene	ND	5.0	88	72	20.0	95	95	0.0	70 - 130	30	

QA/QC Data

SDG I.D.: GCB20634

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Isopropylbenzene	ND	1.0	86	90	4.5	89	89	0.0	70 - 130	30
m&p-Xylene	ND	2.0	83	87	4.7	86	85	1.2	70 - 130	30
Methyl ethyl ketone	ND	5.0	91	93	2.2	88	90	2.2	70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	106	111	4.6	112	110	1.8	70 - 130	30
Methylene chloride	ND	5.0	90	95	5.4	94	95	1.1	70 - 130	30
Naphthalene	ND	5.0	93	96	3.2	91	94	3.2	70 - 130	30
n-Butylbenzene	ND	1.0	87	84	3.5	91	90	1.1	70 - 130	30
n-Propylbenzene	ND	1.0	86	88	2.3	90	89	1.1	70 - 130	30
o-Xylene	ND	2.0	89	92	3.3	90	90	0.0	70 - 130	30
p-Isopropyltoluene	ND	1.0	86	87	1.2	91	90	1.1	70 - 130	30
sec-Butylbenzene	ND	1.0	91	92	1.1	94	93	1.1	70 - 130	30
Styrene	ND	5.0	84	85	1.2	85	85	0.0	70 - 130	30
tert-Butylbenzene	ND	1.0	90	92	2.2	91	90	1.1	70 - 130	30
Tetrachloroethene	ND	5.0	97	92	5.3	99	97	2.0	70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	100	104	3.9	105	102	2.9	70 - 130	30
Toluene	ND	1.0	98	97	1.0	98	97	1.0	70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	104	107	2.8	107	107	0.0	70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	91	90	1.1	89	89	0.0	70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	91	95	4.3	87	86	1.2	70 - 130	30
Trichloroethene	ND	5.0	95	96	1.0	96	94	2.1	70 - 130	30
Trichlorofluoromethane	ND	5.0	109	110	0.9	102	100	2.0	70 - 130	30
Trichlorotrifluoroethane	ND	5.0	105	103	1.9	99	109	9.6	70 - 130	30
Vinyl chloride	ND	5.0	110	109	0.9	110	113	2.7	70 - 130	30
% 1,2-dichlorobenzene-d4	93	%	103	104	1.0	104	104	0.0	70 - 130	30
% Bromofluorobenzene	98	%	98	98	0.0	100	97	3.0	70 - 130	30
% Dibromofluoromethane	114	%	99	103	4.0	100	107	6.8	70 - 130	30
% Toluene-d8	89	%	109	108	0.9	105	107	1.9	70 - 130	30

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 445319 (mg/Kg), QC Sample No: CB20739 (CB20634, CB20635, CB20636, CB20640)

TPH by GC (Extractable Products) - Sediment

Ext. Petroleum H.C. (C9-C36)	ND	50	74	87	16.1	94	89	5.5	60 - 120	30
% n-Pentacosane	62	%	75	88	16.0	89	83	7.0	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 445686 (ug/kg), QC Sample No: CB21364 (CB20636)

Volatiles - Sediment

1,1,1,2-Tetrachloroethane	ND	5.0	106	100	5.8	98	100	2.0	70 - 130	30
1,1,1-Trichloroethane	ND	5.0	93	94	1.1	89	88	1.1	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	3.0	105	95	10.0	97	99	2.0	70 - 130	30
1,1,2-Trichloroethane	ND	5.0	101	93	8.2	88	93	5.5	70 - 130	30
1,1-Dichloroethane	ND	5.0	96	94	2.1	81	79	2.5	70 - 130	30
1,1-Dichloroethene	ND	5.0	98	98	0.0	76	76	0.0	70 - 130	30
1,1-Dichloropropene	ND	5.0	101	104	2.9	91	90	1.1	70 - 130	30
1,2,3-Trichlorobenzene	ND	5.0	103	103	0.0	85	83	2.4	70 - 130	30
1,2,3-Trichloropropane	ND	5.0	100	91	9.4	95	97	2.1	70 - 130	30
1,2,4-Trichlorobenzene	ND	5.0	105	109	3.7	86	83	3.6	70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	103	106	2.9	89	88	1.1	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	5.0	99	91	8.4	104	112	7.4	70 - 130	30
1,2-Dibromoethane	ND	5.0	105	97	7.9	90	91	1.1	70 - 130	30
1,2-Dichlorobenzene	ND	5.0	98	94	4.2	80	80	0.0	70 - 130	30

QA/QC Data

SDG I.D.: GCB20634

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,2-Dichloroethane	ND	5.0	101	94	7.2	96	97	1.0	70 - 130	30	
1,2-Dichloropropane	ND	5.0	99	94	5.2	92	96	4.3	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	101	104	2.9	91	89	2.2	70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	97	99	2.0	79	78	1.3	70 - 130	30	
1,3-Dichloropropane	ND	5.0	105	96	9.0	91	93	2.2	70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	95	95	0.0	76	74	2.7	70 - 130	30	
2,2-Dichloropropane	ND	5.0	106	102	3.8	87	84	3.5	70 - 130	30	
2-Chlorotoluene	ND	5.0	101	102	1.0	87	88	1.1	70 - 130	30	
2-Hexanone	ND	25	99	86	14.1	88	91	3.4	70 - 130	30	
2-Isopropyltoluene	ND	5.0	105	110	4.7	93	92	1.1	70 - 130	30	
4-Chlorotoluene	ND	5.0	100	102	2.0	83	81	2.4	70 - 130	30	
4-Methyl-2-pentanone	ND	25	104	91	13.3	100	103	3.0	70 - 130	30	
Acetone	ND	10	76	67	12.6	64	64	0.0	70 - 130	30	l,m
Acrylonitrile	ND	5.0	88	81	8.3	76	75	1.3	70 - 130	30	
Benzene	ND	1.0	99	98	1.0	89	92	3.3	70 - 130	30	
Bromobenzene	ND	5.0	96	95	1.0	83	85	2.4	70 - 130	30	
Bromochloromethane	ND	5.0	95	90	5.4	85	85	0.0	70 - 130	30	
Bromodichloromethane	ND	5.0	103	96	7.0	94	96	2.1	70 - 130	30	
Bromoform	ND	5.0	110	99	10.5	95	97	2.1	70 - 130	30	
Bromomethane	ND	5.0	96	94	2.1	75	74	1.3	70 - 130	30	
Carbon Disulfide	ND	5.0	98	101	3.0	71	70	1.4	70 - 130	30	
Carbon tetrachloride	ND	5.0	92	95	3.2	82	83	1.2	70 - 130	30	
Chlorobenzene	ND	5.0	99	97	2.0	84	84	0.0	70 - 130	30	
Chloroethane	ND	5.0	101	102	1.0	78	77	1.3	70 - 130	30	
Chloroform	ND	5.0	92	88	4.4	84	83	1.2	70 - 130	30	
Chloromethane	ND	5.0	87	86	1.2	68	70	2.9	70 - 130	30	m
cis-1,2-Dichloroethene	ND	5.0	89	86	3.4	69	71	2.9	70 - 130	30	m
cis-1,3-Dichloropropene	ND	5.0	104	97	7.0	87	89	2.3	70 - 130	30	
Dibromochloromethane	ND	3.0	110	102	7.5	100	103	3.0	70 - 130	30	
Dibromomethane	ND	5.0	102	92	10.3	90	92	2.2	70 - 130	30	
Dichlorodifluoromethane	ND	5.0	77	97	23.0	60	60	0.0	70 - 130	30	m
Ethylbenzene	ND	1.0	99	101	2.0	87	86	1.2	70 - 130	30	
Hexachlorobutadiene	ND	5.0	93	117	22.9	79	71	10.7	70 - 130	30	
Isopropylbenzene	ND	1.0	104	109	4.7	96	95	1.0	70 - 130	30	
m&p-Xylene	ND	2.0	104	105	1.0	90	89	1.1	70 - 130	30	
Methyl ethyl ketone	ND	5.0	81	78	3.8	75	73	2.7	70 - 130	30	
Methyl t-butyl ether (MTBE)	ND	1.0	99	89	10.6	85	86	1.2	70 - 130	30	
Methylene chloride	ND	5.0	83	79	4.9	73	72	1.4	70 - 130	30	
Naphthalene	ND	5.0	113	105	7.3	98	101	3.0	70 - 130	30	
n-Butylbenzene	ND	1.0	99	113	13.2	81	75	7.7	70 - 130	30	
n-Propylbenzene	ND	1.0	100	105	4.9	86	83	3.6	70 - 130	30	
o-Xylene	ND	2.0	110	110	0.0	98	100	2.0	70 - 130	30	
p-Isopropyltoluene	ND	1.0	105	114	8.2	89	87	2.3	70 - 130	30	
sec-Butylbenzene	ND	1.0	105	114	8.2	89	87	2.3	70 - 130	30	
Styrene	ND	5.0	109	107	1.9	89	89	0.0	70 - 130	30	
tert-Butylbenzene	ND	1.0	105	109	3.7	94	92	2.2	70 - 130	30	
Tetrachloroethene	ND	5.0	97	101	4.0	85	84	1.2	70 - 130	30	
Tetrahydrofuran (THF)	ND	5.0	91	80	12.9	83	84	1.2	70 - 130	30	
Toluene	ND	1.0	96	95	1.0	84	86	2.4	70 - 130	30	
trans-1,2-Dichloroethene	ND	5.0	95	96	1.0	75	72	4.1	70 - 130	30	
trans-1,3-Dichloropropene	ND	5.0	103	94	9.1	84	86	2.4	70 - 130	30	
trans-1,4-dichloro-2-butene	ND	5.0	111	102	8.5	87	85	2.3	70 - 130	30	
Trichloroethene	ND	5.0	100	102	2.0	88	88	0.0	70 - 130	30	

QA/QC Data

SDG I.D.: GCB20634

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Trichlorofluoromethane	ND	5.0	96	106	9.9	78	76	2.6	70 - 130	30
Trichlorotrifluoroethane	ND	5.0	81	105	25.8	77	72	6.7	70 - 130	30
Vinyl chloride	ND	5.0	100	102	2.0	74	73	1.4	70 - 130	30
% 1,2-dichlorobenzene-d4	102	%	98	99	1.0	99	98	1.0	70 - 130	30
% Bromofluorobenzene	96	%	102	102	0.0	102	103	1.0	70 - 130	30
% Dibromofluoromethane	88	%	92	89	3.3	90	90	0.0	70 - 130	30
% Toluene-d8	101	%	99	98	1.0	98	98	0.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
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
September 07, 2018

Friday, September 07, 2018

Criteria: None

State: CT

Sample Criteria Exceedances Report

GCB20634 - TIGHE-DAS

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

*** No Data to Display ***

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.

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

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

Project Location: ROCKVILLE MGP ***Project Number:***

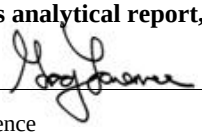
Laboratory Sample ID(s): CB20634-CB20640 ***Sampling Date(s):*** 8/28/2018

List RCP Methods Used (e.g., 8260, 8270, et cetera) 6010, 7470/7471, 8082, 8260, 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	***VPH and EPH methods only:*** **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 Reasonable Confidence Protocol documents acheived? See Sections: ICP Narration, SVOA Narration, VOA Narration.**	☐ Yes ☑ No
5	**a) Were reporting limits specified or referenced on the chain-of-custody?** **b) Were these reporting limits met?**	☐ Yes ☑ No ☑ 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 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, September 07, 2018

Name of Laboratory Phoenix Environmental Labs, Inc.

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

CTDEP RCP Laboratory Analysis QA/QC Certification Form - November 2007
Laboratory Quality Assurance and Quality Control Guidance Reasonable Confidence Protocols

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

September 07, 2018

SDG I.D.: GCB20634

SDG Comments

Metals Analysis: CB20637, CB20638, CB20639
The client requested a site specific list of elements which is shorter than the 6010 RCP list. Only copper is reported as requested on the chain of custody record.

ETPH Narration

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

Instrument:

AU-FID1 08/30/18-1 Jeff Bucko, Chemist 08/30/18

CB20634, CB20635, CB20636

The initial calibration (ETPH723I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-XL2 08/29/18-1 Jeff Bucko, Chemist 08/29/18

CB20640

The initial calibration (ETPH814I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 445319 (CB20739)

CB20634, CB20635, CB20636, CB20640

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 08/29/18 08:52 Rick Schweitzer, Chemist 08/29/18

CB20634, CB20635, CB20636, CB20640

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 445240 (CB20641)

CB20634, CB20635, CB20636, CB20640

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

NY # 11301

Certification Report

September 07, 2018

SDG I.D.: GCB20634

Mercury Narration

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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 445221 (Samples: CB20634, CB20635, CB20636, CB20637, CB20638, CB20639, CB20640): -----

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

Instrument:

ARCOS 08/29/18 08:56 Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 08/29/

CB20634, CB20635, CB20636, CB20637, CB20638, CB20639, CB20640

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 445221 (CB20630)

CB20634, CB20635, CB20636, CB20637, CB20638, CB20639, CB20640

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-ECD24 08/29/18-1 Adam Werner, Chemist 08/29/18

CB20634, CB20635, CB20636, CB20640

The initial calibration (PC827AI) RSD for the compound list was less than 20% except for the following compounds: None.
The initial calibration (PC827BI) 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 445080 (CB19799)

CB20634, CB20635, CB20636, CB20640

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

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RCP Certification Report

September 07, 2018

SDG I.D.: GCB20634

PCB Narration

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? No.

QC Batch 445176 (Samples: CB20634, CB20635, CB20636, CB20640): -----

The LCS/LCSD recovery is below the lower range but within the method criteria. The Batch MS/MSD recovery is acceptable. A slight low bias is possible. (2,4-Dinitrophenol)

The LCS/LCSD recovery is below the method criteria. A low bias is possible. (Benzoic Acid)

The LCS recovery is below the low range but within the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (4,6-Dinitro-2-methylphenol)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (4,6-Dinitro-2-methylphenol)

Instrument:

CHEM05 08/28/18-1 Keith Aloisa, Chemist 08/28/18

CB20634, CB20635, CB20636, CB20640

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 Verification (CHEM05/SPLIT_0827A):
94% of target compounds met criteria.
The following compounds had %RSDs >20%: 2,4-Dinitrophenol 21% (20%), 2-Nitroaniline 24% (20%), 4,6-Dinitro-2-methylphenol 21% (20%), Benzoic acid 24% (20%), Pentachlorophenol 36% (20%)
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.058 (0.1), Hexachlorobenzene 0.085 (0.1)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM05/0828_04-SPLIT_0827A):
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: 2-Nitrophenol 0.063 (0.1), Hexachlorobenzene 0.083 (0.1)
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 445176 (CB20488)

CB20634, CB20635, CB20636, CB20640

All LCS recoveries were within 30 - 130 with the following exceptions: 2,4-Dinitrophenol(11%), 4,6-Dinitro-2-methylphenol(24%),

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RCP Certification Report

September 07, 2018

SDG I.D.: GCB20634

SVOA Narration

Benzoic Acid(<10%)
All LCSD recoveries were within 30 - 130 with the following exceptions: 2,4-Dinitrophenol(14%), Benzoic Acid(<10%)
All LCS/LCSD RPDs were less than 30% with the following exceptions: 4,6-Dinitro-2-methylphenol(31.6%)
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%)

VOA Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? No.

QC Batch 445496 (Samples: CB20634, CB20635, CB20640): -----

The LCS/LCSD recovery is acceptable. One or more analytes in the site specific matrix spike recovery is below the lower range but within the method criteria, therefore a slight low bias is likely. (Acetone)

QC Batch 445686 (Samples: CB20636): -----

The LCSD and Batch MS/MSD recovery is below the lower range but within the method criteria. A slight low bias is possible. (Acetone)

Instrument:

CHEM18 08/29/18-1 Jane Li, Chemist 08/29/18

CB20634, CB20635, CB20640

Initial Calibration Verification (CHEM18/VT-M0817):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2,4-Trichlorobenzene 21% (20%), Acetone 34% (20%), Methyl Ethyl Ketone 23% (20%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM18/0829M02-VT-M0817):
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.

CHEM31 08/30/18-1 Jane Li, Chemist 08/30/18

CB20636

Initial Calibration Verification (CHEM31/VT-L0828):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Acetone 29% (20%), Chloroethane 29% (20%)
The following compounds did not meet recommended response factors: Bromoform 0.086 (0.1), Tetrachloroethene 0.123 (0.2), Trichloroethene 0.194 (0.2)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM31/0830_02-VT-L0828):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

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RCP Certification Report

September 07, 2018

SDG I.D.: GCB20634

VOA Narration

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: Bromoform 0.097 (0.1)
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 445686 (CB21364)

CB20636

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: Acetone(67%)
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QC (Site Specific):

Batch 445496 (CB20635)

CB20634, CB20635, CB20640

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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.
All MS recoveries were within 70 - 130 with the following exceptions: Acetone(69%)
All MSD recoveries were within 70 - 130 with the following exceptions: Acetone(62%)
All MS/MSD RPDs were less than 30% with the following exceptions: None.
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Temperature Narration

The samples were received at 2.1C with cooling initiated.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler: Yes ☒ No ☐
Coolant: IPK ☒ ICE ☐ No ☐

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

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

Temp 3.1 °C Pg 1 of 1

Data Delivery/Contact Options:
☐ Fax:
☐ Phone:
☒ Email: LEwilley@Tighebond.com

Customer: Tighe + Bond
Address: 213 Court Street Suite 1100
Middletown CT

Project: Rockville MGP
Report to: Lynn Willey
Invoice to: Tighe + Bond

Project P.O: E-0755-448

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/28/18

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

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOC	SVOC	ETPH	RCRA metals	PCBs	TAL Cyanide	GL Amber 8 oz. w/H3PO4	Soil VOA Vials ☒ methanol ☒ H2O	GL Soil container (4) oz	GL Soil container (4) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml [ ] 1000ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
20634	SED-07	SE	9/28/18	14:40	X	X	X	X	X			3	2									
20635	SED-08			14:25	X	X	X	X	X			3	2									
20636	SED-09			15:10	X	X	X	X	X			3	2									
20637	SED-06A			15:45						X				1								
20638	SED-06B			15:50						X				1								
20639	SED-06C			15:55						X				1								
20640	SED-Dup-1			0900	X	X	X	X	X			3	2									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	TRamm	9/28/18	1655

Comments, Special Requirements or Regulations:
DAS Pricing
quote: TE012507BA

Turnaround:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☒ Standard
☐ Other
* SURCHARGE APPLIES

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☒ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
☐ MCP Certification
☐ GW-1
☐ GW-2
☐ GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

Data Format
☒ Excel
☒ PDF
☐ GIS/Key
☐ EQuIS
☒ Other Geotech

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☒ Phoenix Std Report
☐ Other
* SURCHARGE APPLIES

State where samples were collected: CT

The Connecticut Light and Power Company
d/b/a Eversource Energy
Docket No. 26-05-10
Date Issued September 29, 2026
RSR-032 Attachment 17
Page 802 of 1282

Client Services

Subject: FW: Phoenix Labs - GCB20634, ROCKVILLE MGP - COC Acknowledgement
Attachments: noaa_9327_DS1.pdf

Sarah Bell
Client Services - Project Manager
Accounts Receivable
Phoenix Environmental Laboratories
587 East Middle Turnpike
Manchester, CT 06040
Ph: 1-860-645-1102

From: Lynn E. Willey [mailto:LEWilley@tighebond.com]
Sent: Wednesday, August 29, 2018 9:15 AM
To: Client Services; Greg Lawrence
Cc: Benjamin P. Caswell
Subject: RE: Phoenix Labs - GCB20634, ROCKVILLE MGP - COC Acknowledgement

Sarah:

We are looking for sediment criteria Threshold Effects Concentrations (TECs)/ Probable effects concentrations (PECs) and NOAA Effects Range Low (ERL).

Thanks.

Lynn E. Willey, P.G., LEP | Senior Environmental Scientist
Tighe & Bond | 213 Court Street Suite 1100 | Middletown, CT 06457
| 860.852.5214 | 860-729-7502 (cell)
www.tighebond.com | Follow us on: Twitter Facebook LinkedIn

From: Client Services <clientservices@phoenixlabs.com>
Sent: Wednesday, August 29, 2018 9:06 AM
To: Lynn E. Willey <LEWilley@tighebond.com>; Greg Lawrence <greg@phoenixlabs.com>
Cc: Benjamin P. Caswell <BCaswell@tighebond.com>
Subject: RE: Phoenix Labs - GCB20634, ROCKVILLE MGP - COC Acknowledgement
Importance: High

From: Lynn E. Willey [mailto:LEWilley@tighebond.com]
Sent: Tuesday, August 28, 2018 9:21 PM
To: Client Services
Cc: Benjamin P. Caswell
Subject: Re: Phoenix Labs - GCB20634, ROCKVILLE MGP - COC Acknowledgement

Hi there

For the SED samples, these are sediment samples and will need to be compared to squirt / sediment TECs.

Thanks

Lynn
Sent from my iPhone

On Aug 28, 2018, at 9:17 PM, "clientservices@phoenixlabs.com" <clientservices@phoenixlabs.com> wrote:

> Lynn,
>
> Price Quote#: TI012517BA
>
> Purchase Order#:E-0755-44B
>
> GCB20634 Criteria:
> None.
>
> Please email client services only if you require criteria different than what is listed.
>
> Delivery group GCB20634 (ROCKVILLE MGP) has been logged in for the following samples:

Phoenix Id	Client Id
CB20634	SED-07
CB20635	SED-08
CB20636	SED-09
CB20637	SED-06A
CB20638	SED-06B
CB20639	SED-06C
CB20640	SED-DUP-1

> The samples were received at 2.1C with cooling initiated. (Note acceptance criteria for relevant matrices is above freezing up to 6°C)
>
> If there are any questions regarding this submittal, please call Phoenix Client Services at extension 200.
>
> Phoenix Environmental Laboratories, Inc.
> 587 East Middle Turnpike
> P.O. Box 370
> Manchester, CT 06374
> Tel. (860) 645-1102
> Fax. (860) 645-0823
> www.phoenixlabs.com
>
> Please do not reply to this email.
>
> <Sample Acknowledgement.pdf>



Screening Quick Reference Tables

These tables were developed for screening purposes only: they do not represent official NOAA policy and do not constitute criteria or clean-up levels.
All attempts have been made to ensure accuracy; however, NOAA is not liable for errors. Values are subject to changes as new data become available.

This set of NOAA Screening Quick Reference Tables, or SQuiRTs, presents screening concentrations for inorganic and organic contaminants in various environmental media. Additional reference material, such as guidelines for sample preservation, are also included.

NOAA identifies potential impacts to coastal resources and habitats likely to be affected by hazardous wastes. To screen for substances which may threaten natural resources of concern to NOAA, environmental concentrations are compared to these screening levels. These tables are intended for preliminary screening purposes only: they do not represent official NOAA policy and do not constitute criteria or clean-up levels. NOAA does not endorse their use for any other purposes. Screening levels are reported with the number of significant figures they were originally reported with.

In this new version, column headings link to OR&R's web site wherebrief descriptions of the benchmark may be found. However, detailed guidance on the recommended application of various screening guidelines is provided in the original sources (listed in each SQuiRT section, with web links for many). Users of the SQuiRT cards are strongly encouraged to review supporting documentation to determine appropriateness for their specific use.

The SQuiRT card set has been re-organized from earlier versions to accommodate expansion. Benchmarks from numerous new sources have been incorporated, and the list of analytes vastly increased. The SQuiRT cards present benchmarks representing different degrees of protectiveness. Multiple benchmarks are also provided in many cases: the user is advised to review the derivation of any particular benchmark before selecting a specific value. Information is still presented in sections, with *new sections* appearing in this expanded version:

- Inorganics in Sediment (freshwater and marine)
- Inorganics in Soil
- Inorganics in Water (groundwater and surface water)
- Organics in Sediment
- Organics in Water and Soil
- *PCB Composition*
- *Toxic Equivalency Factors*
- *Composition by Carbon Range*
- Guidelines for Sample Collection & Storage
- Analytical Methods for Inorganics
- Analytical Methods for Organics

Footnotes within each SQuiRT section which appear at the bottom of the page are only to aid in deciphering the nature of specific entries. Due to space constraints, notations which relate to the source for individual values are explained at the end of the section. Organic chemicals are now listed alphabetically, without categorization. A few synonyms are provided, but CAS numbers are also presented to aid in identifying and finding specific analytes. Except as noted, all concentrations in the SQuiRT cards are in parts per billion.

For surface water samples, because releases from hazardous waste sites are often continuous and long-term, concentrations are most often compared directly with chronic benchmarks, when available. Groundwater concentrations are also screened against chronic benchmarks. However, suitable site-specific dilution factors should be applied to allow for dilution upon migration and discharge of groundwater to surface water. The SQuiRT cards present U.S. Environmental Protection Agency (EPA) Maximum Contaminant Levels (MCLs), applicable to drinking water sources and secondary MCLs applicable to groundwater, supplemented by values from Canada and the United Nations World Health Organization.

Preference for surface water and groundwater benchmarks is given to U.S. EPA Ambient Water Quality Criteria (AWQC). This is generally followed by Tier II Secondary Acute Values (SAVs) or available standards and guidelines from other regulatory agencies. Tier II SAVs are derived using a similar approach to AWQC, but do not have sufficient supporting data for full criteria calculation. Lowest Observable Effect Levels (LOELs) were originally published by EPA with AWQC. Around 2000, EPA stopped publishing these values, however, LOELs are reproduced here when no other benchmark is available, because in many instances, they formed the basis for state standards.

For many trace elements, AWQC are now expressed in terms of the "dissolved" fraction, which is essentially defined operationally as a filtered fraction. Likewise, the toxicity of many trace elements is related to the water hardness, and the values presented are for a default hardness of 100 mg/L $CaCO_3$. Equations are provided in the SQuiRT cards to calculate the exact criteria for a given hardness, or, to convert from unfiltered, total concentrations to "dissolved" fractions.

Screening Quick Reference Table for Inorganics in Sediment

These tables were developed for screening purposes only: they do not represent official NOAA policy and do not constitute criteria or clean-up levels.
All attempts have been made to ensure accuracy; however, NOAA is not liable for errors. Values are subject to changes as new data become available.

Analyte		FRESHWATER SEDIMENT									MARINE SEDIMENT						
All concentrations in parts per billion dry weight unless specified otherwise		"Background" [1]	ARCS *H. azteca* TEL [2]	TEC [3]	TEL [3]	LEL [4]	PEC [3]	PEL [3]	SEL [4]	UET [1]	T_{20} [5]	TEL [6]	ERL [6]	T_{50} [5]	PEL [6]	ERM [6]	AET [7]
Predicted Toxicity Gradient:		> Increasing →									> Increasing →						
Aluminum (%)	Al	0.26%	2.55%														1.8% N
Antimony	Sb	160								3,000 M	630			2,400			9,300 E
Arsenic	As	1,100	10,798	9,790	5,900	6,000	33,000	17,000	33,000	17,000 I	7,400	7,240	8,200	20,000	41,600	70,000	35,000 B
Barium	Ba	700										130,100#					48,000 A
Cadmium	Cd	100-300	583	990	596	600	4,980	3,530	10,000	3,000 I	380	680	1,200	1,400	4,210	9,600	3,000 N
Chromium	Cr	7,000-13,000	36,286	43,400	37,300	26,000	111,000	90,000	110,000	95,000 H	49,000	52,300	81,000	141,000	160,000	370,000	62,000 N
Cobalt	Co	10,000				50,000+											10,000 N
Copper	Cu	10,000-25,000	28,012	31,600	35,700	16,000	149,000	197,000	110,000	86,000 I	32,000	18,700	34,000	94,000	108,000	270,000	390,000 MO
Iron (%)	Fe	0.99-1.8 %	18.84%			2%			4%	4% I							22% N
Lead	Pb	4,000-17,000	37,000	35,800	35,000	31,000	128,000	91,300	250,000	127,000 H	30,000	30,240	46,700	94,000	112,000	218,000	400,000 B
Manganese	Mn	400,000	630,000			460,000			1,100,000	1,100,000 I							260,000 N
Mercury	Hg	4-51		180	174	200	1,060	486	2,000	560 M	140	130	150	480	700	710	410 M
Nickel	Ni	9,900	19,514	22,700	18,000	16,000	48,600	36,000	75,000	43,000 H	15,000	15,900	20,900	47,000	42,800	51,600	110,000 EL
Selenium	Se	290															1,000 A
Silver	Ag	<500				500 +				4,500 H	230	730	1,000	1,100	1,770	3,700	3,100 B
Strontium	Sr	49,000															
Tin	Sn	5,000										48 *					> 3,400 N
Vanadium	V	50,000															57,000 N
Zinc	Zn	7,000-38,000	98,000	121,000	123,000	120,000	459,000	315,000	820,000	520,000 M	94,000	124,000	150,000	245,000	271,000	410,000	410,000 I
Lead 210 $^{bq}/_{g}$ dw						0.5 ^			< 9.7 ^								
Polonium 210 $^{bq}/_{g}$ dw						0.6 ^			< 8.7 ^								
Radium 226 $^{bq}/_{g}$ dw						0.1 ^			< 13 ^								
Sulfides										130,000 M							4,500 MO

\# - Based on SLC approach using sensitive species HC5%; ES&T 2005 39(14):5148-5156.
* - Based upon EQp approach using current AWQC CCC
^ - Based on SLC approach to derive LEL and SEL; Env'al Monitor & Ass'ment 2005 110:71-85
\+ - Carried over from Open Water disposal Guidelines; treated as if LEL for management decisions.
Bioassay endpoints: M – Microtox; B – Bivalve; E – Echinoderm larvae; O – Oyster larvae;
A – Amphipod; N – Neanthes; L –Larval bioassay; plus, I – Infaunal community impacts

Sources

1 – Buchman, M. 1999. NOAA HAZMAT Report 99-1.
2 – EPA 905-R96-008
3 – Arch ET&C 2000, 39(1)20- TEL and PEL are also known as Canadian ISQGs and PELs
4 – Guidelines for the protection and management of aquatic sediment quality in Ontario Aug 1993
5 – ET&C 2002, 21(9)1993-
6 – Ecotox. 1996, 5(4):253-
7 – Chapter 173-204 WAC, 1991/95 as supplemented by WA Dept of Ecology staff with unpublished data.



Screening Quick Reference Table for Inorganics in Soil

These tables were developed for screening purposes only: they do not represent official NOAA policy and do not constitute criteria or clean-up levels.
All attempts have been made to ensure accuracy; however, NOAA is not liable for errors. Values are subject to changes as new data become available.

ANALYTE			BACKGROUND [1]		DUTCH STANDARDS [2]		Eco-SSL [3]				Microbes [4]
All concentrations in parts per billion dry weight unless specified otherwise		CAS Number	Mean	Range	Target	Intervention	Avian	Inverts	Mammals	Plants	
Aluminum	Al	7429905	4.70%	0.5- >10%						50,000 a	600,000
Antimony	Sb	7440360	480	bd-8,800	3,000	15,000		78,000	142 v	5,000 a	
Arsenic	As	7440382	5,200	bd-97,000	900 L	55,000	43,000	60,000 a	5,700 v	18,000	100,000
Barium	Ba	7440393	440,000	10,000-0.5%	160,000	625,000		330,000	1,040 v	500,000 a	3,000,000
Beryllium	Be	7440417	630	bd-15,000	1,100	30,000 S		40,000	1,060 v	10,000 a	
Boron	B	7440428	26,000	bd-300,000						500 a	20,000
Bromine	Br	7726956	560	bd-11,000	20,000					10,000 a	
Cadmium	Cd	7440439			800	12,000	770	20,000 a	2.22 v	4,000 a	20,000
Chromium III	Cr	7440473	< 37,000	1,000-0.2%	< 380 L	< 220,000 L	26,000	<400 a	34,000	< 1,000 a	< 10,000
Chromium VI	Cr	18540299	< 37,000		< 380 L	< 220,000 L		400 a	81,000	< 1,000 a	< 10,000
Cobalt	Co	7440484	6,700	bd-70,000	2,400 L	180,000 L	120,000		140 v	13,000	1,000,000
Copper	Cu	7440508	17,000	bd-700,000	3,400 L	96,000 L	28,000	50,000 a	5,400 v	70,000	100,000
Cyanide (total complex)	CN	57125			5,000	50,000 (pH>5)			1,330 v		
Cyanide (total free)	CN				1,000	20,000					
Fluorine	F	7782414	210,000	bd-0.37%	500,000					200,000 a	30,000
Iodine	I	7553562	750	bd-9,600						4,000 a	
Iron	Fe	7439896	1.80%	0.01- >10%							200,000
Lanthanum	La	7439910	30,000	bd-200,000							50,000
Lead	Pb	7439921	16,000	bd-700,000	55,000 L	530,000	11,000	500,000 a	53.7 v	50,000 a	900,000
Lithium	Li	7439932	20,000	bd-140,000						2,000 a	10,000
Manganese	Mn	7439965	330,000	bd-0.7%			4,300,000	450,000	4,000,000	220,000	100,000
Mercury	Hg	7439976	58	bd-4,600	300	10,000		100 a v		300 a	30,000
Mercury(methyl)		22967926			37 L	4,000 L		< 100 a v	1.58 v	< 300 a	
Molybdenum	Mo	7439987	590	bd-15,000	3,000	190,000 L				2,000 a	200,000
Nickel	Ni	7440020	13,000	bd-700,000	260 L	100,000 L	210,000	200,000 a	13,600 v	30,000 a	90,000
Selenium	Se	7782492	260	bd-4,300	700 L	100,000 S	1,2000	4,100	630	520	100,000
Silver	Ag	7440224				15,000 S	4,200		4,040 v	2,000 a	50,000
Strontium	Sr	7440246	120,000	bd-0.3%							
Sulfide		18496258							3.58 v		
Sulfur	S	7704349	0.12%	bd-4.8%							
Technetium	Tc	7440268								200 a	

1: bd – below detection
2: S – serious contamination level; L – Environmental Risk Limit

Screening Quick Reference Table for Inorganics in Soil

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ANALYTE All concentrations in parts per billion dry weight unless specified otherwise		CAS Number	BACKGROUND [1]		DUTCH STANDARDS [2]		Eco-SSL [3]				Microbes [4]
			Mean	Range	Target	Intervention	Avian	Inverts	Mammals	Plants	
Tellurium	Te	13494809				600,000					
Thallium	Tl	7440280	8,600	2,20-31,000	1,000	15,000 S			56.9 v	1,000 a	
Tin	Sn	7440315	890	bd-10,000	19,000 background	900,000 S			7,620 v	50,000 a	2,000,000
Titanium	Ti	7440326	0.224 %	0.007-2 %							1,000,000
Tin as Triphenyltin		668348				< 2,500					
Tungsten	W	7440337									400,000
Uranium	U	7440611	2,300	290-11,000						5,000 a	
Vanadium	V	7440622	58,000	bd-500,000	42,000	250,000 S	7,800		1,590 v	2,000 a	20,000
Zinc	Zn	7440666	48,000	bd-0.29%	16,000 L	350,000 L	46,000	6,620 v		50,000 a	100,000

Sources

1 – USGS Prof. Paper 1270, 1984. Mean is geometric mean of national data.

2 – Entry is lower of current VROM Environmental Quality standards or the updated RIVM Environmental Risk Limits. Risk limits are typically divided by 100 to derive the Target value; this computation has not been done here.
Dutch Target/Intervention: E.M.J. Verbruggen, R. Posthumus and A.P. van Wezel, 2001. Ecotoxicological Serious Risk Concentrations for soil, sediment, and (ground)water: Updated proposal for first series of compounds. Nat. Inst. Public Health and the Env., and subsequent updates as published elsewhere.
Min. Housing, Spatial Plan. And the Env., 2000. Annexes Circular on target values and intervention values for soil remediations.

3 – Entry is lower of either:
EPA Eco-SSLs, www.epa.gov/ecotox/ecossl/
a – ORNL Screening benchmark for earthworms and soil microorganisms: ORNL 1997a, ES/ER/TM-126/R2
v – EPA R5 Eco Screening levels soil - shrew or vole, www.epa.gov/reg5rcra/ca/

4 - ORNL 1997b, ES/ER/TM-85/R3.

1: bd – below detection
2: S – serious contamination level; L – Environmental Risk Limit



Screening Quick Reference Table for Inorganics in Water

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ELEMENT All concentrations in parts per billion unless specified otherwise		GROUND WATER [1]	SURFACE WATERS [2]			
			Freshwater		Marine	
			Acute	Chronic	Acute	Chronic
Aluminum	Al	50-200 *	pH 750	pH 87		
Antimony	Sb	6	88 p	30 p	1,500 p	500 p
Arsenic III	As^{+3}	<10		190 E		2.3 NZ
Arsenic V	As^{+5}	< 10	66 T	3.1 T	2,319 *	
Arsenic, Total	As	10	340	150	69	36
Barium	Ba	2,000	110 T	3.9 E	1,000 BC	200 BC
Beryllium	Be	4	35 T	0.66 T	1,500 BC	100 BC
Boron	B	5,000 C	30 T	1.6 T		1,200
Cadmium	Cd	5	2.0 †	0.25 †	40	8.8
Chromium III	Cr^{+3}	< 100	570 †	74 †	10,300 *	27.4 NZ
Chromium VI	Cr^{+6}	< 100	16	11	1,100	50
Chromium, Total	Cr	100				
Cobalt	Co		1,500 T	3.0 E		1 NZ
Copper	Cu	1,300	13 †	9 †	4.8	3.1
Fluoride	F	4,000	200 BC (hardness < 50)		1,500 BC	
Gallium	Ga			18 NZ		use 18 NZ
Iron	Fe	300 *		1,000	300 BC	50 BC
Lanthium	La			0.04 NZ		
Lead	Pb	15	65 †	2.5 †	210	8.1
Lithium	Li		260 T	14 T		
Manganese	Mn	50 *	2,300 T	80 E		100 BC
Mercury	Hg	2	1.4	0.77	1.8	0.94
Methyl Mercury			0.099 T	0.0028 T		
Molybdenum	Mo	70 W	16,000 T	34 NZ		23 NZ
Nickel	Ni	20 W	470 †	52 †	74	8.2
Phosphorus	P					0.1
Potassium	K		373,000 BC			
Selenium	Se	50	13-186 total	5 total	290	71
Silver	Ag	100 *	1.6 (½) †	0.36 T	0.95 (½)	
Strontium	Sr		15,000 T	1,500 T		
Thallium	Tl	2	110 T	0.03 NZ	2,130 *	17 NZ
Tin as TBT			0.46	0.072	0.42	0.0074

1: * – Secondary standard
2: pH – criteria is pH dependent ; p - proposed; † - hardness dependent; * - EPA LOEL ; (½) - CMC is halved to compare to 1985 Guideline derivation



Screening Quick Reference Table for Inorganics in Water

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ELEMENT All concentrations in parts per billion unless specified otherwise		GROUND WATER [1]	SURFACE WATERS [2]			
			Freshwater		Marine	
			Acute	Chronic	Acute	Chronic
Tin as Di-N-Butyl			0.08 BC			
Tin as Triethyl			0.4 BC			
Tin as Triphenyl			0.022 BC		34 BC	
Titanium	Ti		2,000 BC			
Uranium	U	30	46 T	0.5 NZ	500 BC	100 BC
Vanadium	V		280 T	19 E		50 BC
Zinc (Zn)	Zn	5,000 *	120 †	120 †	90	81
Zirconium	Zr		310 T	17 T		
Hydrogen Sulfide			2		2	
Cyanide, free	CN	200	22	5.2	1	1

Freshwater criterion for certain elements (†) are expressed as a function of hardness (mg/L) in the water column. The values shown assume 100 mg/L. Values for a different hardness may be calculated using the following equations to arrive at a CMC or CCC for *filtered* samples. Hardness may range up to 400 mg/L as calcium carbonate. For hardness above this range, use 400 mg/L as the maximum value allowed.

For salinity between 1 and 10 ppt, use the more stringent of either fresh or marine values.

Sources

1 – Primary entry is the US EPA MCL value, followed by the WHO drinking water guidelines.
Maximum Contaminant Levels (MCLs): http://www.epa.gov/safewater/index.html
W – World Health Organization's (WHO) Drinking water guidelines: http://www.who.int/water_sanitation_health/dwq/en/
C – Canadian water Quality Guidelines: http://www.ec.gc.ca/CEQG-RCQE/English/Ceqg/Water/default.cfm

2 – Primary entry is the US Ambient Water Quality Criteria, followed by the lowest of Tier II SAVs or available standards and guidelines.
EPA Ambient water Quality Criteria (AWQC): http://www.epa.gov/waterscience/criteria/aqlife.html
T – Tier II Secondary Acute Value: http://www.esd.ornl.gov/programs/ecorisk/tools.html
BC – British Columbia Water Quality Guidelines (either working or recommended): http://www.env.gov.bc.ca/wat/wq/
NZ – Australian & New Zealand ECLs and Trigger values: ANZECC Oct 2000, Volume 1, The Guidelines. www.mfe.govt.nz/publications/
E – EcoUpdate: www.epa.gov/oswer/riskassessment/ecoup/

Lowest Observable Effect Levels (LOELs) previously published by EPA are also included since these essentially were the basis for many state standards.
EPA LOELs: EPA Water quality Criteria Summary, Office of Science & Technology, Health & Ecological Criteria Div., Ecological Risk Assessment Branch, 1991.
Full listings appeared in various Fed. Register notices and in EPA's Quality Criteria for Water, 1992.

1: * – Secondary standard
2: pH – criteria is pH dependent ; p - proposed; † - hardness dependent; * - EPA LOEL ; (½) - CMC is halved to compare to 1985 Guideline derivation

Screening Quick Reference Table for Inorganics in Water

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ELEMENT	HARDNESS CALCULATIONS – UNFILTERED FRESHWATER CRITERIA		UNFILTERED TO FILTERED CALCULATIONS		
	CMC	CCC	Fresh water CMC	Freshwater CCC	Marine CMC / CCC
Arsenic (As)			1	1	1
Cadmium (Cd)	CMC = $e^{1.0166\ [\ ln(\text{hardness})]\ -\ 3.924}$	CCC = $e^{0.7409\ [\ ln(\text{hardness})]\ -\ 4.719}$	CF = 1.136672 - 0.041838 [*ln*(hardness)]	CF = 1.101672 - 0.041838 [*ln*(hardness)]	CF = 0.994
Chromium III (Cr+3)	CMC = $e^{0.819\ [\ ln(\text{hardness})]\ +\ 3.7256}$	CCC = $e^{0.819\ [\ ln(\text{hardness})]\ +\ 0.6848}$	CF = 0.316	CF = 0.860	–
Chromium VI (Cr +6)			CF = 0.982	CF = 0.962	CF = 0.993
Copper (Cu)	CMC = $e^{0.9422\ [\ ln(\text{hardness})]\ -\ 1.7}$	CCC = $e^{0.8545\ [\ ln(\text{hardness})]\ -\ 1.702}$	CF = 0.960	CF = 0.960	CF = 0.83
Lead (Pb)	CMC = $e^{1.273\ [\ ln(\text{hardness})]\ -\ 1.46}$	CCC = $e^{1.273\ [\ ln(\text{hardness})]\ -\ 4.705}$	CF = 1.46203 - 0.145712 [*ln*(hardness)]	SAME AS CMC	CF = 0.951
Mercury (Hg)			CF = 0.85	CF = 0.85	CF = 0.85
Nickel (Ni)	CMC = $e^{0.846\ [\ ln(\text{hardness})]\ +\ 2.255}$	CCC = $e^{0.846\ [\ ln(\text{hardness})]\ +\ 0.0584}$	CF = 0.998	CF = 0.997	CF = 0.990
Selenium (Se)			–	–	CF = 0.998
Silver (Ag)	CMC = $e^{1.72\ [\ ln(\text{hardness})]\ -\ 6.52}$	CCC — No criteria	CF = 0.85	–	CF = 0.85 / –
Zinc (Zn)	CMC = $e^{0.8473\ [ln(\text{hardness})]\ +\ 0.884}$	CCC = $e^{0.8473\ [\ ln(\text{hardness})\ +0.884}$	CF = 0.978	CF = 0.986	CF = 0.946

Freshwater criterion for certain elements are expressed as a function of hardness (mg/L) in the water column. The values shown assume 100 mg/L. Values for a different hardness may be calculated using the above equations to arrive at a CMC or CCC for *filtered* samples. Hardness may range up to 400 mg/L as calcium carbonate. For hardness above this range, use 400 mg/L as the maximum value allowed.

Criteria for most metals are expressed as standards for samples filtered through 0.45 m filter (*i.e.*, "dissolved"). To convert unfiltered concentrations to filtered, multiply the unfiltered concentration value by the appropriate Conversion Factor (CF) above. For cadmium and lead, the conversion factor itself is hardness-dependent.

CMC: Criteria Maximum Concentration is the highest level for a 1-hour average exposure not to be exceeded more than once every three years, and is synonymous with "acute."
CCC: for a 4-day average exposure not to be exceeded more than once every three years, and is synonymous with "chronic."

Sources

EPA Ambient water Quality Criteria (AWQC): http://www.epa.gov/waterscience/criteria/aqlife.html



Screening Quick Reference Tables for Organics – Sediment

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ANALYTE All concentrations in parts per billion dry weight unless specified otherwise	CAS Number	FRESHWATER SEDIMENT								DUTCH Sediment[5]		MARINE SEDIMENT							Eco Tox EqP[9] @1%TOC
		ARCS *Hyalella* TEL[1]	TEL[2]	TEC[2]	LEL[3]	PEL[2]	PEC[2]	SEL[3]	UET[4] @1%TOC	Target	Intervention	T_{20}[6]	TEL[7]	ERL[7]	T_{50}[6]	PEL[7]	ERM[7]	AET[8]	
2,3,7,8-TCDD dioxin TEQs	1746016		0.00085 c			0.0215 c			0.0088†H		1 S		0.00085 c			0.0215 c		0.0036 N	
Acenaphthene	83329		6.71 c			88.9 c			290 M			19	6.71	16	116	88.9	500	130 E	
Acenaphthylene	208968		5.87 c			128 c			160 M			14	5.87	44	140	128	640	71 E	
Acrylonitrile	107131									0.07	100 S								
Aldrin	309002				2			80	40 I	0.06	1,700 LB							9.5 AE	
Aldrin + Dieldrin + Endrin	na									5	140 L								
Anthracene	120127	10	46.9 c	57.2	220	245 c	845	3,700	260 M	39 LB	1,600 LB	34	46.9	85.3	290	245	1,100	280 E	
Atrazine	1912249									0.2	710 LB								
BCH compounds (sum)	na									10	6,400 L								
Benz[a]anthracene	56553	15.72	31.7	108	320	385	1,050	14,800	500 I	25 L	2,500 L	61	74.8	261	466	693	1,600	960 E	
Benzene	71432									10	1,000								57
Benzo(ghi)perylene	191242				170			3,200	300 M	570 LB	33,000 LB	67			497			670 M	
Benzo[a]pyrene	50328	32.4	31.9	150	370	782	1,450	14,400	700 I	52 L	7,000 L	69	88.8	430	520	763	1,600	1,100 E	
Benzo[b]fluoranthene	205992											130			1,107			1,800 E I	
Benzo[k]fluoranthene	207089	27.2			240			13,400	13,400B	380 LB	38,000 LB	70			537			1,800 E I	
Benzoic acid	65850																	65 O	
Benzyl alcohol	100516																	52 B	
BHC, alpha (α-HCH)	319846				6			100		3	< 2,000								
BHC, beta (β-HCH)	319857				5			210		9	< 2,000								
BHC, delta (δ-HCH)	319868									< 10	< 2,000								
BHC, gamma- (γ-HCH; Lindane)	58899		0.94	2.37	3	1.38	4.99	10	9 I	0.05	1,200 L		0.32			0.99		> 4.8 N	3.7
Biphenyl	92524											17			73				1,100
Bis(2-ethylhexyl)phthalate (DEHP)	117817								750 †M	< 100	10,000 LB		182			2647		1,300 I	
Bromoform (Tribromomethane)	75252										75,000								650
Butanol	35296721										30,000 S								
Butyl acetate, 1- or 2-	na										200,000 S								
Butyl benzyl phthalate	85687									< 100	48,000 LB							63 M	1,100
Carbaryl	63252									0.03	450 LB								
Carbofuran	1563662									0.02	17 LB								
Carbon tetrachloride (Tetrachloromethane; Tetra)	56235									170 LB	1,000								1,200

4: Entry is lowest, reliable value among AET tests, on 1% TOC basis: I - Infaunal community impact ; M - Microtox bioassay ; H - *Hyalella azteca* bioassay ; † - value on dry weight basis.
5: S – Serious Contamination; L – Environmental Risk Limit for soil; LB – Environmental Risk Limit for soil or bedded sediment
8: Entry is lowest value among AET tests: I - Infaunal community impact ; A - Amphipod ; B - Bivalve ; M- Microtox bioassay ; O - Oyster larvae ; E - Echinoderm larvae ; L - Larval$_{max}$; or , N - *Neanthes* bioassay.



Screening Quick Reference Tables for Organics – Sediment

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		ARCS *Hyalella* TEL[1]	TEL[2]	TEC[2]	LEL[3]	PEL[2]	PEC[2]	SEL[3]	UET[4] @1%TOC	Target	Intervention	T_{20}[6]	TEL[7]	ERL[7]	T_{50}[6]	PEL[7]	ERM[7]	AET[8]	
Catechol (o-Dihydroxybenzene)	120809									3.2 LB	2,600 LB								
Chlordane	57749		4.5	3.24	7	8.9	17.6	60	30 I	0.03	4,000		2.26	0.5		4.79	6	2.8 A	
Chlordane (alpha)	5103719									< 0.03	< 4,000								
Chlordane (gamma)	5103742									< 0.03	< 4,000								
Chloro, 4- 2-methyl phenol	1570645										< 15,000 S								
Chloro, 4- 2-methylphenoxy acetic acid (MCPA)	94746									0.05	4,000								
Chloro, 4- 3-methyl phenol	59507										< 15,000 S								
Chloro, 4- methyl phenols	na										15,000 S								
Chloroaniline	27134265									5	50,000								
Chlorobenzenes (sum)	na									30	30,000								820
Chloroform (trichloromethane)	67663									20	10,000								
Chloronaphthalene, 1-	90131									57 LB	< 10,000								
Chloronaphthalene, 2-	91587									250 LB	< 10,000								
Chlorophenol, 2-	95578									55 LB	7,800 LB							0.333	
Chlorophenol, 3-	108430									35 L	14,000 L								
Chlorophenol, 4-	106489									20 LB	1,400 LB								
Chlorophenols (sum)	na									10	10,000								
Chrysene	218019	26.83	57.1	166	340	862	1,290	4,600	800 I	8,100 LB	35,000 LB	82	108	384	650	846	2,800	950 E	
Cresol [m-] (3-Methyl phenol)	108394									1,600 L	16,000 L								
Cresol [o-] (2-Methyl phenol)	95487									500 L	50,000 L							8 B	
Cresol [p-] (4-Methyl phenol)	106445									5.1 LB	2,600 LB							100 B	
Cresols, sum	1319773									50	5,000								
Cyclohexanone	108941									100	45,000								
DDD, 4,4- (p,p-DDD, TDE)	72548		3.54	4.88	8	8.51	28	60	< 60 I	3.9 LB	34,000 LB		1.22	2		7.81	20	< 16 I	
DDE, 4,4- (p,p-DDE)	72559		1.42	3.16	5	6.75	31.3	190	<50 I	5.8 LB	1,300 LB		2.07	2.2		374	27	< 9 I	
DDT, 4,4- (p,p-DDT)	50293		1.19 c	4.16	8	4.77 c	62.9	710	50 I	9.8 LB	1,000 L		1.19	1		4.77	7	< 12 E	
DDT+DDE+DDD (sum)	na		7	5.28	7	4,450	572	120	50 I	10	4,000		3.89	1.58		51.7	46.1	11 B	
Diazinon	333415																		1.9
Dibenz[ah]anthracene	53703	10	6.22 c	33	60	135 c		1,300	100 M			19	6.22	63.4	113	135	260	230 OM	
Dibenzofuran	132649								5,100 H									110 E	2,000

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Screening Quick Reference Tables for Organics – Sediment

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		ARCS *Hyalella* TEL[1]	TEL[2]	TEC[2]	LEL[3]	PEL[2]	PEC[2]	SEL[3]	UET[4] @1%TOC	Target	Intervention	T_{20}[6]	TEL[7]	ERL[7]	T_{50}[6]	PEL[7]	ERM[7]	AET[8]	
Dichloroaniline, 2,4-	554007									< 5	< 50,000 S								
Dichloroaniline, 3,4-	95761									< 5	< 50,000 S								
Dichloroaniline, 3,4-	95761									< 5	< 50,000 S								
Dichlorobenzene, 1,2-	95501									< 30	17,000 LB							13 N	340
Dichlorobenzene, 1,3-	541731									< 30	24,000 LB								1700
Dichlorobenzene, 1,4-	106467									< 30	18,000 LB							110 IM	350
Dichlorobenzenes	25321226									< 30	19,000 LB								
Dichloroethane, 1,1-	75343									20	15,000								
Dichloroethane, 1,2-	107062									20	4,000								
Dichloroethene, 1,1- (vinylidene chloride)	75354									100	300								
Dichloroethene, 1,2- (cis or trans)	540590									200	1,000								
Dichlorophenol, 2,4-	120832									< 10	8,400 LB							0.2083	
Dichlorophenol, 2,6-	87650									< 10	57,000 LB								
Dichlorophenol, 3,4-	95772									< 10	57,000 LB								
Dichlorophenol, 3,5-	591355									< 10	5,400 LB								
Dichlorophenols (sum)	na									< 10	22,000 LB								
Dichloropropane, 1,2- (propylene dichloride)	78875									< 2	< 2,000								
Dieldrin ‡	60571		2.85	1.9	2	6.67	61.8	910	300 I	0.5	1,900 LB	0.83	0.72	0.02	2.9	4.3	8	1.9 E	
Diethyl phthalate	84662									530 L	53,000 L							6 BL	630
Diethylene-glycol	111466										270,000 S								
Dihydroxybenzenes, sum	na									62 LB	8,000 LB								
Di-iso-butyl phthalate	84695									92 LB	17,000 LB								
Dimethyl phthalate	131113									1,000 LB	84,000 LB							6 B	
Dimethylnaphthalene, 2,6-	581420											25			133				
Dimethylphenol, 2,4-	105679																	18 N	
Di-n-butyl phthalate	84742								110 H	7,000 LB	36,000 LB							58 BL	11,000
Di-n-octyl phthalate	117840									< 100	< 60,000							61 BL	
Dodecylbenzene	25155300										1,000,000 S								
Endosulfan (a or b)	115297									0.01	4,000								2.9 α 14 β

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		ARCS *Hyalella* TEL[1]	TEL[2]	TEC[2]	LEL[3]	PEL[2]	PEC[2]	SEL[3]	UET[4] @1%TOC	Target	Intervention	T_{20}[6]	TEL[7]	ERL[7]	T_{50}[6]	PEL[7]	ERM[7]	AET[8]	
Endosulfan II	33213659																		
Endrin	72208		2.67	2.22	3	62.4	207	1,300	500 I	0.04	95 L								
Ethyl acetate	141786										75,000 S								
Ethyl acetate	141786										75,000 S								
Ethyl benzene	100414									30	50,000							4 EL	3,600
Ethylene glycol	107211										100,000 S								
Fluoranthene	206440	31.46	111	423	750	2,355	2,230	10,200	1,500 M	1,000 LB	260,000	119	113	600	1,034	1,494	5,100	1,300 E	
Fluorene	86737	10	21.2 c	77.4	190	144 c	536	1,600	300 M			19	21.2	19	114	144	540	120 E	540
Formaldehyde	50000										100 S								
Guthion (Azinphos-methyl)	865000									0.005	2,000 S								
Heptachlor	76448								10 I	0.7	4,000							0.3 B	
Heptachlorepoxide	1024573		0.6	2.47	5	2.74	16	50	30 I	0.0002	4,000	0.6 c				2.74 c			
Hexachlorobenzene	118741				20			240	100 I	1.4 LB	2,000 LB							6 B	
Hexachlorobutadiene (HCBD)	87683																	1.3 E	
Hexachlorocyclohexane (BHC)	608731				3			120	100 I										
Hexachloroethane	67721																	73 BL	1,000
Hydroquinone (p-dihydroxybenzene)	123319									50	43,000 LB								
Indeno[1,2,3-cd]pyrene	193395	17.32			200			3,200	330 M	31 LB	1,900 LB	68			488			600 M	
Linar alkylbenzene sulfonates (LAS)	na												<12,800 €			>62,000 €			
Malathion	121755																		0.67
Maneb	12427382									2	22,000 L								
Methanol	67561										30,000 S								
Methoxychlor	72435																		19
Methyl ethyl ketone (MEK; 2-Butanone)	78933										35,000 S								
Methyl naphthalene, 2-	91576											21	20.2	70	128	201	670	64 E	
Methylene chloride (Dichloromethane, DCM)	75092									18 LB	3,900 L								
Methylnaphthalene, 1-	90120											21			94				
Methylphenanthrene, 1-	832699											18			112				
Methyl-tert-butyl ether (MTBE)	1634044										100,000 S								
Mirex	2385855				7			1,300	800 I										

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Monochloroaniline (3 isomers)	na									5	50,000								
Monochlorobenzenes	108907									< 30	15,000 LB								820
Monochloronaphthalenes	na									120 LB	10,000								
Monochlorophenols (sum)	na									< 10	5,400 L								
Naphthalene	91203	14.65	34.6 c	176		391 c	561		600 I	120 LB	17,000 LB	30	34.6	160	217	391	2,100	230 E	480
Nitrobenzene	98953																	21 N	
Nitrosodiphenylamine, N-	86306																	28 I	
Nonylphenol	25154523		1,400 c										1,000 c						
PAHs, Low MW	na	76.42							5,300 M	< 1,000	< 40,000		312	552		1,442	3,160	1,200 E	
PAHs, High MW	na	193							6,500 M	< 1,000	< 40,000		655	1,700		6,676	9,600	7,900 E	
PAHs, Total	na	264.1		1,610	4,000		22,800*	100,000*	12,000 M	1,000	40,000		1,684	4,022		16,770	44,792		
PCB 105	32598144									1.5 LB	< 1,000								
PCB 126	57465288									0.0025 LB	920 LB								
PCB 77	32598131									0.42 LB	< 1,00								
PCB-Aroclor 1254	na		60 c		60	340 c		340					63.3 c			709 c			
PCBs (sum)	1336363	31.62	34.1	59.8	70	277	676	5,300	26 M	0.3 LB	1,000	35	21.6	22.7	368	189	180	130 M	
Pentachloroaniline	527208										10,000 S								
Pentachlorobenzene	608935									15 LB	16,000 LB								690
Pentachlorophenol [PCP: at ph 7.8‡]	87865									< 10	8,000 LB							17 B	
Perylene	198550											74			453				
Phenanthrene	85018	18.73	41.9	204	560	515	1,170	9,500	800 I	3,300 LB	31,00 LB	68	86.7	240	455	544	1500	660 E	
Phenol	108952								48 † H	50	14,000 LB							130 E	
Phthalates (sum)	na									100	60,000								
Propanol, 2- (Isopropanol)	67630										220,000 S								
Pyrene	129000	44.27	53	195	490	875	1,520	8,500	1,000 i			125	153	665	932	1,398	2,600	2,400 E	
Pyridine	110861									100	500								
Resorcinol (m-dihydroxybenzene)	108463									34 LB	4,600 LB								
Styrene (Vinyl benzene)	100425									200 LB	86,000 LB								
Tetrachloroaniline, 2,3,5,6-	3481207										< 30,000 S								
Tetrachlorobenzene, 1,2,3,4-	634662									160 L	16,000 L								
Tetrachlorobenzene, 1,2,3,5-	634902									6.5 L	650 L								

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Tetrachlorobenzene, 1,2,4,5-	95943									10 L	1,000 L								
Tetrachlorobenzenes	na									22 L	2,200 L								
Tetrachloroethylene (Tetrachloroethene; PCE; PER)	127184									2	4,000							57 I	530
Tetrachlorophenol, 2,3,4,5-	4901513									< 10	< 10,000								
Tetrachlorophenol, 2,3,4,6-	58902									< 10	< 10,000								
Tetrachlorophenols (sum)	25167833									< 10	< 10,000								
Tetrahydrofuran	109999									100	2,000								
Tetrahydrothiophene	110010									100	8,800 LB								
Toluene	108883									10	47,000 L								670
Toxaphene	8001352		0.1 c										0.1 c						28
Tributyltinoxide	56359									< 10	< 2,500								
Trichloroaniline (multiple isomers)	na										10,000 S								
Trichloroaniline, 2,4,5-	636306										< 10,000 S								
Trichlorobenzene, 1,2,3-	87616									< 11 L	5,000 L								
Trichlorobenzene, 1,2,4-	120821									11 LB	5,100 LB							> 4.8 E	9,200
Trichlorobenzenes	12002481									38 L	11,000 L								
Trichloroethane, 1,1,1-	71556									70	15,000								170
Trichloroethane, 1,1,2-	79005									400	10,000								
Trichloroethene (TCE)	na									7.8 L	2,500 L							41 N	1,600
Trichlorophenol, 2,3,5-	na									< 10	4,500 L								
Trichlorophenol, 2,4,5-	95954									< 10	22,000 LB							3 I	
Trichlorophenol, 2,4,6-	88062									< 10	110,000 LB							6 I	
Triclorophenols, (sum)	na									< 10	22,000 L								
Vinyl chloride	75014									10	100								
Xylene	1330207									130 LB	17,000 LB							4 BL	
Xylene, m-	108383									110 LB	18,000 LB								25
Xylene, o-	95476									89 LB	9,300LB								

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Sources

1 – Assessment & Remediation of Contaminated Sediments (ARCS) Program, Sept 1996. EPA 905-R96-008.

2 – MacDonald et al, 2000. Arch ET&C 39(1):20-
C – Canadian Sediment Quality Guidelines for the Protection of Aquatic Life, Summary Tables Update 2002, www.ccme.ca/publications/cegg_rcqe.html

3 – Persuad 1993. Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario. Thompson et al., 2005. Enval Monitor & Assessment 110:71-

4 – Buchman 1999. NOAA HAZMAT Report 99-1.

5 – Entry is lower of current VROM Environmental Quality standards or the updated RIVM Environmental Risk Limits. Risk limits are typically divided by 100 to derive the Target value; this computation has not been done here.
Dutch Target/Intervention: E.M.J. Verbruggen, R. Posthumus and A.P. van Wezel, 2001. Ecotoxicological Serious Risk Concentrations for soil, sediment, and (ground)water: updated proposal for first series of compounds. Nat. Inst. Public Health and the Env., and subsequent updates as published elsewhere.
Min. Housing, Spatial Plan. And the Env., 2000. Annexes Circular on target values and intervention values for soil remediations.

6 – Field et al., 2002. ET&C 21:1993-

7 – MacDonald et al., 1996. Ecotox. 5(4):253-
C – Canadian Sediment Quality Guidelines for the Protection of Aquatic Life, Summary Tables Update 2002, www.ccme.ca/publications/cegg_rcqe.html
€ - DelValls et al., 1999. Ecotox. & Env Rest 2(1):34-

8 – Wash Dept Ecol Publ 95-308, 1995 and 97-323a, 1997
Gries & Waldrow Puget Sound Dredged Disposal Analysis Rept 1996. http://www.ecy.wa.gov/biblio/wac173204.html
plus unpublished information.

9 – EcoUpdate EcoTox Thresholds, http://www.epa.gov/oswer/riskassessment/

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		Dutch [1]		MCL [2]	Fresh		Marine		Invertebrates [4]	Mammals [5]	Plants [6]	Other [7]
		Target	Intervention		Acute [3]	Chronic [3]	Acute [3]	Chronic [3]				
2,3,7,8-TCDD (dioxin TEQs)	1746016		0.001 ng/L S	0.00003	<0.01 *	<0.00001 *				0.000199		
2,4,5-Trichlorphenoxyacetic acid (2,4,5-T)	93765			9 W		36 NZ				596		
2,4-Dichlorophenoxyacetic acid (2,4-D)	94757			70		4.0 CA				27.2		
Acenaphthene	83329				1,700 *	5.8 CA	970 *	40 Eco		682,000	20,000	
Acenaphthylene	208968					4,840 V	300 *C			682,000		
Acetone	67641				28,000 T	1,500 T				2,500		
Acetonitrile	75058					160 NZ				1,370		
Acetophenone	98862									300,000		
Acetylaminofluorene, 2-	53963									596		
Acridine	260946					4.4 CA						
Acrolein	107028				68 *	0.01 NZ	55 *	0.1 NZ		5,270		
Acrylonitrile	107131	0.08	5 S		7,550 *	2,600 *				23.9		1,000,000 M 0.007 D
Alcohol ethoxylated surfactants (AE)	na					140 NZ						
Alcohol ethoxyolated sulfate (AES)	na					650 NZ						
Aldicarb	116063			9 C		1 CA		0.15 CA				
Aldrin	309002	0.009 ng/L	< 0.1		1.5 (½)	0.017 V	0.65 (½)				3.32 v	0.06 D
Aldrin+Dieldrin+Endrin	na		0.1	<0.03 W								5 D
Allyl chloride	107051									13.4		
Aminobiphenyl, 4-	92671									3.05		
Aminomethylphosphonic acid (AMPA)	1066519	0.797 L										
Amitrole	61825					22 NZ						
Aniline	62533					2.2 CA				56.8		
Anthracene	120127	0.0007	5		13 T	0.73 T 0.012 CA	300 *C			1.48E6		
Aramite	140578									16,600		
Atrazine	1912249	29 ng/L	76 L	3		1.8 CA		10 BC				0.2 D
Benz[a]anthracene	56553	0.0001	0.5		0.49 T	0.027 T	300 *C			5,210		
Benzene	71432	0.2	30	5	2,300 T	46 Eco	5,100 *	110 CA		255		10 D
Benzidine	92875				70 T	3.9 T						
Benzo(ghi)perylene	191242	0.0003	0.05			7.64 V	300 *C			119,000		
Benzo[a]pyrene	50328	0.0005	0.05	0.2	0.24 T	0.014 T Eco	300 *C			1,520		

1: L – Environmental Risk Limit; S – Serious Contamination Level
3: p - proposed; * - LOEL; C - value for chemical class; S - value for summation of isomers; (½) - CMC is halved to compare to 1985 Guideline derivation; x 0.1 – chronic value derived by division of acute value by 10
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		Target	Intervention		Acute [3]	Chronic [3]	Acute [3]	Chronic [3]				
Benzo[b]fluoranthene	205992					9.07 V	300 *C			59,800		
Benzo[k]fluoranthene	207089	0.0004	0.05				300 *C			148,000		
Benzoic acid	65850				740 T	42 T						
Benzyl alcohol	100516				150 T	8.6 T				65,800		
BHC, alpha (α-HCH)	319846	33 ng/L	<1		39 T	2.2 T				99.4		3 D
BHC, beta (β-HCH)	319857	8 ng/L	<1		39 T	2.2 T 0.495 V					3.98 v	9 D
BHC, delta δ-HCH)	319868	< 0.05	<1		39 T	2.2 T				9,940		< 10 D
BHC, gamma- (γ-HCH; Lindane)	58899	9 ng/L	<1	0.2	0.95	0.08	0.08 (½)				5 v	0.05 D
BHC (sum)	na	0.05	1		< 0.95	< 0.08	< 0.08					10 D
Biphenyl	92524					14 T Eco					60,000	
Bis(2-chloroethoxy) methane	111911				11,000 *C		12,000 *C	6,400 *C		302		
Bis(2-chloroethyl) ether	111444					1,900 V				23,700		
Bis(2-ethylhexyl)phthalate (DEHP)	117817	1.9 ng/L L	< 5	6	400 p	32 Eco 16 CA 0.3 V	400 p	360 p		925		< 100 D
Bis-2-chloro-1-methylethylether	108601									19,900		
Bromocil	314409					5 CA						
Bromodichloromethane (Dichlorobromomethane)	75274			60 W	11,000 *C		12,000 *C	6,400 *C		540		
Bromoform (Tribromomethane)	75252		630		2,300 T	320 T Eco				15,900		
Bromoxynil	1689845			5 C		5 CA						
Butanol	35296721		5,600 S									
Butyl acetate, 1- or 2-	na		6,300 S									
Butyl benzyl phthalate	85687	2.9 ng/L L	< 5		940 *C	19 T Eco	2,944 *C	3.4 *C		239		< 100 D
Captan	133062					1.3 CA						
Carbaryl	63252	2 ng/L	41 L	90 C		0.2 CA		0.32 CA				
Carbofuran	1563662	9 ng/L	6.5 L	40		1.8 CA		0.06 NZ				
Carbon disulfide	75150				17 T	0.92 T				94.1		
Carbon tetrachloride (Tetrachloromethane;Tetra)	56235	0.01	10	5	180 T	9.8 T	50,000 *	5,000 x 0.1		2,980		1,000,000 M 400 D
Catechol (o-Dihydroxybenzene)	120809	0.2	630 L									50 D

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		Target	Intervention		Acute [3]	Chronic [3]	Acute [3]	Chronic [3]				
Chlordane	57749	0.02 ng/L	0.2	2	1.2 (½)	0.00215 (½)	0.045 (½)	0.002 (½)			224 v	0.03 D
Chlordane (alpha)	5103719	< 0.02 ng/L	< 0.2								< 224 v	< 0.03 D
Chlordane (gamma)	5103742	< 0.02 ng/L	< 0.2								< 224 v	< 0.03 D
Chlorfenvinphos	470906					0.1 EU		0.1 EU				
Chloroacetamide	79072								2,000			5 D
Chloroaniline	27134265		30									< 5 D
Chloroaniline, 3-	108429		< 30						30,000		20,000	< 5 D
Chloroaniline, 4-	106478		< 30		250 *C	50 *C	160 *C	129 *C		1,100		< 30 D
Chlorobenzenes (sum)	na	< 7	< 180	100		130 Eco <47 V			< 40,000	< 13,100		30 D
Chlorobenzilate	510156									5,050		20 D
Chloroform (trichloromethane)	67663	6	400	200 W	490 T	1.8 CA				1,190		
Chloro, 4- 2-methyl phenol	1570645		< 350 S									
Chloro, 4- 3-methyl phenol	59507		< 350 S							7,950		
Chloro, 4- methyl phenols	na		350 S							< 7,950		
Chloro, 4- 2-methylphenoxy acetic acid (MCPA)	94746	0.02	50	2 W		2.6 CA		4.2 CA				0.05 D
Chloronaphthalene, 1-	90131	3.7 ng/L L	< 6									
Chloronaphthalene, 2-	91587	0.016 L	< 6		1,600 * C	0.396 V	7.5 * C			12.2		
Chlorophenol, 2-	95578	< 0.3	< 100		4,380 *	490 NZ 24 V				243		< 10 D
Chlorophenol, 3-	108430	< 0.3	< 100						10,000		7,000	< 10 D
Chlorophenol, 4-	106489	< 0.3	< 100			220 NZ						< 10 D
Chlorophenols (sum)	na	0.3	100			< 24 V			< 10,000	< 243	< 7,000	< 10 D
Chloroprene	126998									2.9		
Chlorothalonil	1897456			200 BC		0.18 CA		0.36 CA				
Chlorpyrifos	2921882			30 W	0.083	0.041	0.011	0.0056				
Chrysene	218019	0.003	0.2				300 *C			4,730		
Cresol [m-] (3-Methyl phenol)	108394	< 0.2	< 200							3,490		< 50 D
Cresol [o-] (2-Methyl phenol)	95487	< 0.2	<200		230 T	13 T				40,400		< 50 D
Cresol [p-] (4-Methyl phenol)	106445	< 0.2	< 200							163,000		< 50 D
Cresols, sum	1319773	0.2	200		< 230 T	< 13 T				< 3,490		50 D
Cyclohexanone	108941	0.5	15,000									100 D

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		Target	Intervention		Acute [3]	Chronic [3]	Acute [3]	Chronic [3]				
DDD, 4,4- (p,p-DDD, TDE)	72548	<0.004 ng/L	< 0.01	< 1 W	0.19 T	0.011 T	3.6 *	0.36 x 0.1		758		< 10 D
DDE, 4,4- (p,p-DDE)	72559	<0.004 ng/L	< 0.01	< 1 W	1,050 *	105 x 0.1	14 *	1.4 x 0.1		596		< 10 D
DDT, 4,4- (p,p-DDT)	50293	<0.004 ng/L	< 0.01	< 1 W	0.55 (½)	0.0005 (½)	0.065 (½)	0.0005 (½)		3.5		< 10 D
DDT+DDE+DDD (sum)	na	0.004 ng/L	0.01	1 W	<0.55 (½)	<0.0005 (½)	<0.065 (½)	<0.0005 (½)		21 EPA		93 A 10 D
Decane	124185				880 T	49 T						
Deltamethrin	52918635					0.0004 CA						
Demeton	8065483					0.1		0.1				
Diallate	2303164									452		
Diazinon	333415			20 C	0.17	0.17	0.82	0.82				
Dibenz[ah]anthracene	53703						300 *C			18,400		
Dibenzofuran	132649				66 T	3.7 T						
Dibromo, 1,2- 3-chloropropane (DBCP)	96128			0.2						35.2		
Dibromochloromethane (Chlorodibromomethane)	124481			100 W	11,000 *C		12,000 *C	6,400 *C		2,050		
Dibromoethane, 1,2-	106934			0.4 W						1,230		
Dicambia	1918009			120 C		10 CA						
Dichloro, 1,4- 2-butene (cis)	1476115											1,000,000 M
Dichloro, 1,4- 2-butene (trans)	110576											1,000,000 M
Dichloroaniline, 2,4-	554007		< 100 S			7 NZ			100,000			< 5 D
Dichloroaniline, 3,4-	95761		< 100 S			3 NZ		150 NZ	20,000			< 5 D
Dichlorobenzene, 1,2-	95501	< 3	< 50	600	260 T	0.7 CA	< 1,970 *S	42 CA		2,960		< 30 D
Dichlorobenzene, 1,3-	541731	< 3	< 50		630 T	71 T Eco 38 V	< 1,970 *S			37,700		< 30 D
Dichlorobenzene, 1,4-	106467	< 3	< 50	75	180 T	15 T Eco 60 NZ 9.4 V	< 1,970 *S	129 *C	20,000	546		< 30 D
Dichlorobenzenes	25321226	3	50	< 75	< 180 T	< 0.7 CA	1,970 *S		< 20,000	< 548		< 30 D
Dichlorobenzidine, 3,3-	91941					4.5 V				646		
Dichlorodifluoromethane	75718									39,500		
Dichloroethane, 1,1-	75343	7	900		830 T	47 T Eco				20,100		20 D
Dichloroethane, 1,2-	107062	7	400	5	8,800 T	100 CA	113,000 *	11,300 x 0.1		21,200		20 D

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Dichloroethene, 1,1- (vinylidene chloride)	75354	0.01	10	7	450 T	25 T	224,000 *S			8,280		100 D
Dichloroethene, 1,2- (cis or trans)	540590	0.01	20	70 cis	1,100 T	590 T	224,000 *S					200 D
Dichloroethene, 1,2- (trans)	156605			100	11,600 *S	1,160 x 0.1	224,000 *S			784		
Dichlorophenol, 2,4-	120832	< 0.2	< 30	900 C	2,020 *	160 NZ 11 V				87,500		< 10 D
Dichlorophenol, 2,6-	87650	< 0.2	< 30			< 0.2 CA				1,170		< 10 D
Dichlorophenol, 3,4-	95772	< 0.2	< 30			< 0.2 CA			20,000		20,000	< 10 D
Dichlorophenol, 3,5-	591355	< 0.2	< 30			< 0.2 CA						< 10 D
Dichlorophenols (sum)	na	0.2	30	< 900 C	<2,020 *	0.2 CA			< 20,000	< 1,170	< 20,000	< 10 D
Dichloropropane, 1,2- (propylene dichloride)	78875	< 0.08	< 80	5	23,000 *S	5,700 *S	10,300 *S	3,040 *S	700,000	32,700		< 2 D
Dichloropropene, 1,3-	542756			20 W	0.99 T	0.055 T	790 *S					
Dichloropropene, 1,3- (cis)	10061015			< 20 W	< 0.99 T	< 0.055 T				398		
Dichloropropene, 1,3- (trans)	10061026			< 20 W	< 0.99 T	< 0.055 T				398		
Diclofop-methyl	51338273			9 C		6.1 CA						
Dicofol	115322					0.5 NZ		0.1 NZ				
Didecyl dimethyl ammonium chloride (DDAC)	7173515					1.5 CA						
Dieldrin ‡	60571	0.1 ng/L	< 0.1		0.24	0.056	0.355 (½)	0.00095 (½)		2.38		22 A
Diethyl phthalate	84662	< 0.5	< 5		1,800 T	210 T 110 V	2,944 *C	3.4 *C		24,800	100,000	< 100 D
Diethylene-glycol	111466		13,000 S									
Dihydroxybenzenes, sum	na	0.24 L										
Di-iso-butyl phthalate	84695	< 0.5	< 5									< 100 D
Dimethoate	60515			6 W		6.2 CA 0.15 NZ				218		
Dimethyl aminoazobenzene [p-]	60117									40		
Dimethyl benz(a)anthracene, 7,12-	57976									16,300		
Dimethyl benzidine, 3,3-	119937									104		
Dimethyl naphthalene, 2,6-	581420											
Dimethyl phenethylamine [alpha,alpha]	122098									300		
Dimethyl phenol, 2,4-	105679				2,120 *	100 V					10 V	
Dimethyl phthalate	131113	< 0.5	< 5		940 *C	3 *C	2,944 *C	3.4 *C	200,000	734,000		< 100 D

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Di-n-butyl phthalate	84742	< 0.5	< 5		190 T	19 CA 9.7 V	2,944 *C	3.4 *C		150	200,000	< 100 D
Dinitrobenzene, 1,3-	99650									655		
Dinitrophenol, 2,4-	51285				230 *C	45 NZ 19 V	4,850 *C			60.9		
Dinitrotoluene, 2,4-	121142				330 *	65 NZ 44 V	590 * S	370 *S		1,280		
Dinitrotoluene, 2,6-	606202									32.8		
Di-n-octyl phthalate	117840	< 0.5	< 5		940 *C	3 *C	2,944 *C	3.4 *C		709,000		< 100 D
Dinoseb	88857			7		0.05 CA				21.8		
Dioxane, 1,4-	123911									2,050		
Dioxins (sum of PCDDs)	na		0.001 ng/L S							0.000199		
Diphenlyhydrazine 1,2-	122667				270 *	27 x 0.1						
Diphenylamine	122394									1,010		
Diquat	85007			20		1.4 NZ						
Disulfoton	298044									19.9		
Diuron	330541			150 C		0.1EU		0.1EU				
Dodecylbenzene	25155300		0.02 S									
Endosulfan (α or β: I or II)	115297	0.2 ng/L	5		0.11 (½)	0.028 (½)	0.017 (½)	0.00435 (½)		119		0.01 D
Endosulfan sulfate	1031078					2.22 V				35.8		
Endrin	72208	0.04 ng/L	< 0.1	2	0.086	0.036	0.0185 (½)	0.00115 (½)		10.1		0.04 D
Endrin aldehyde	7421934					0.15 V				10.5		
Esfenvalerate	66230044					0.001 NZ						
Ethanol	64175					1,400 NZ						
Ethyl acetate	141786		15,000 S									
Ethyl benzene	100414	4	150	700	130 T	7.3 T 14 V	430 *	25 CA		5,160		30 D
Ethyl methacrylate	97632									30,000		
Ethylene glycol	107211		5,500 S			192,000 CA						
Famphur	52857									49.7		
Fenitrothion	122145					0.2 NZ						
Fluoranthene	206440	0.003	1		3,980 *	0.04 CA	40 *	11 Eco		122,000		
Fluorene	86737				70 T	3.9 T Eco	300 *C		30,000	122,000		

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Formaldehyde	50000		50 S	900 W								
Furan	110009										600,000	
Glyphosate	1071836			280 C		65 CA						
Guthion (azinphos-methyl)	865000	0.1 ng/L	2 S	20 C		0.01 0.02 NZ		0.01				0.005 D
Heptachlor	76448	0.005 ng/L	0.3	0.4	0.26 (½)	0.0019 (½)	0.0265 (½)	0.0018 (½)		5.98		0.7 D
Heptachlor epoxide	1024573	0.005 ng/L	3	0.2	0.26 (½)	0.0019 (½)	0.0265 (½)	0.0018 (½)		152		0.0002 D
Hexachlorobenzene	118741	2.1E-7 L	0.5	1	6 p	3.68 p 0.0003 V	160 *C	129 *C		199		1,000,000 M
Hexachlorobutadiene (HCBD)	87683			0.6 W	90 *	1.3 CA 0.053 V	32 *	3.2 x 0.1		39.8		
Hexachlorocyclohexane (BHC)	608731				100 *	10 x 0.1	0.34 *	0.034 x 0.1				
Hexachlorocyclopentadiene	77474			50	7 *	5.2 *	7 *	0.7 x 0.1		755	10,000	
Hexachloroethane	67721				210 T	12 T Eco 8 V	940 *	94 x 0.1		596		
Hexachlorophene	70304									199		
Hexane	110543				10 T	0.58 T						
Hexanone, 2- (methyl butyl ketone)	591786				1,800 T	99 T				12,600		
Hydroquinone (p-dihydroxybenzene)	123319	0.2	800									50 D
Indeno[1,2,3-cd]pyrene	193395	0.0004	0.05			4.31 V	300 *C			109,000		
Iodo, 3- 2-propynl butyl carbamate (IPBC)	55406536					1.9 CA						
Isodrin	465736										3.32 v	
Isophorone	78591				117,000 *	1,170 x 0.1 920 V	12,900 *	1,290 x 0.1		139,000		
Isoproturon	34123596			9 W		0.1 EU		0.1 EU				
Isosafrole	120581									9,940		
Kepone	143500									32.7		
Linar alkylbenzene sulfonates (LAS)	na					280 NZ						
Linuron	335502					7.0 CA						
Malathion	121755			190 C		0.1		0.1				
Maneb	12427382	0.05 ng/L	0.1									2 D
Methacrylonitrile	126987									57		
Methanol	67561		24,000 S									

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Methanol	67561		24,000 S									
Methapyrilene	91805									2,780		
Methomyl	16752775					3.5 NZ						
Methoxychlor	72435			40		0.03		0.03		19.9		
Methyl bromide	74839					16 V				235		
Methyl chloride	74873									10,400		
Methyl cholanthrene, 3-	56495									77.9		
Methyl, 2- 4,6-dinitrophenol	534521									144		
Methyl ethyl ketone (MEK; 2-Butanone)	78933		6,000 S		240,000 T	14,000 T				89,600		
Methyl iodide	74884									1,230		
Methyl methacrylate	80626									984,000		
Methyl methanesulfanate	66273									315		
Methyl naphthalene, 1-	90120				37 T	2.1 T						
Methyl naphthalene, 2-	91576					330 V	300 *C			3,240		
Methyl parathion	298000									0.292		
Methyl, 4- 2-pentanone	108101				2,200 T	170 T				443,000		
Methyl-tert-butyl ether (MTBE)	1634044		9,200 S			10,000 CA		5,000 CA				
Methylene bromide (Dibromomethane)	74953				11,000 *C		12,000 *C	6,400 *C		65,000		
Methylene chloride (Dichloromethane, DCM)	75092	0.01	1,000	5	26,000 T	2,200 T 98.1 CA	12,000 *C	6,400 *C		4,050		400 D
Metolachlor	51218452			10 W		7.8 CA						
Metribuzin	21087649			80 C		1 CA						
Mineral oil (Operationally defined)	8012951	50	600									50,000 D
Mirex	2385855					0.001		0.001				
Molinate	2212671			6 W		3.4 NZ						
Monochloroaniline (3 isomers)	na		30									5 D
Monochlorobenzenes	108907	7	180	100	1,100 T	1.3 CA	160 *C	25 CA	40,000	13,100		< 30 D
Monochloronaphthalenes		7.7 [ng]/L L	6									120 L
Monochlorophenols (sum)	na	0.3	100			7 CA						< 10 D
Naphthalene	91203	0.01	70		190 T	1.1 CA	2,350 *	1.4 CA		99.4		
Naphthoquinone, 1,4-	130154									1,670		

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Naphthylamine, 1-	134327									9,340		
Naphthylamine, 2-	91598									3,030		
Nitroaniline [m-]	99092									3,160		
Nitroaniline [p-]	100016									21,900		
Nitroaniline, 2-	88744									74,100		
Nitrobenzene	98953				27,000 *	550 NZ 220 V	6,680 *	668 x 0.1	40,000	1,310		1,000,000 M
Nitro-o-toluidine, 5-	99558									8,730		
Nitrophenol, 2-	88755									1,600		
Nitrophenol, 4-	100027				1,200 T	300 T 60 V	4,850 *C		7,000	5,120		
Nitroquinoline, 4- 1-oxide	56575									122		
Nitrosodiethylamine, N-	55185					768 V				69.3		
Nitrosodimethylamine, N-	62759									0.0321		
Nitroso-di-n-butylamine, N-	924163									267		
Nitroso-di-n-propylamine, N-	621647									544		
Nitrosodiphenylamine, N-	86306				3,800 T	210 T	3,300,000*C		20,000	545		
Nitrosomethylethylamine, N-	10595956									1.66		
Nitrosomorpholine, N-	59892									70.6		
Nitrosopiperidine, N-	100754									6.65		
Nitrosopyrrolidine, N-	930552									12.6		
Nonylphenol	25154523				28	6.6	7	1.7				
O,O-diethyl O-2-pyrazinylphosphorothioate	297972									799,000		
Octanone, 2-	111137				150 T	8.3 T						
PAHs, High MW	na						300 *C		29,000 EPA	100,000 EPA		< 1,000 D
PAHs, Low MW	na						300 *C		18,000 EPA	1,100 EPA		< 1,000 D
PAHs, Total	na						300 *C					1,000 D
Paraquat	4685147					0.5 NZ						
Parathion	56382			50 C	0.065	0.013			0.34 V			
PCBs (sum)	1336363	0.01	0.01	0.5	0.6 T 0.03 NZ	0.014	0.033 T	0.03		0.332	40,000	< 20 D
Pentachloroaniline	527208		1 S						100,000			

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Pentachlorobenzene	608935	0.003	1		8.4 T	0.47 T 0.019 V	160 *C	129 *C	20,000	497		< 30 D
Pentachloroethane	76017				7,240 *	1,100 *	390 *	281 *		10,700		
Pentachloronitrobenzene	82688									7,090		
Pentachlorophenol [PCP: at pH 7.8]	87865	0.04	3	1.0	19 ph	15 Ph	13	7.9	6,000	119	3,000	2,100 A
Pentanol, 1-	71410				2,000 T	110 T						
Permethrin	52645531					0.004 CA		0.001 CA				
Phenacetin	62442									11,700		
Phenanthrene	85018	0.003	5		30 p	6.3 p Eco 3.6 V	7.7 p	4.6 p		45,700		
Phenol	108952	0.2	2,000		10,200 *	320 NZ 180 V	5,800 *	400 NZ	30,000	120,000	70,000	1,000,000 M 500 D
Phenylenediamine [p-]	106503									6,160		
Phorate	298022			2 C						0.496		
Phthalates (sum)	na	0.5	5									100 D
Picloram	1918021			500		29 CA						
Picoline, 2-	109068									9,900		
Polychlorinated dibenzofurans	51207319									0.0386		
Pronamide	23950585										13.6 v	
Propanol, 2- (Isopropanol)	67630		31,000 S		130 T	7.5 T						
Propionitrile	107120									49.8		
Propylene glycol	57556					500,000 CA						
Pyrene	129000					0.025 CA	300 *C			78,500		
Pyridine	110861	0.5	30							1,030		100 D
Quinoline	91225					3.4 CA						
Resorcinol (m-dihydroxybenzene)	108463	0.2	600									50 D
Safrole	94597									404		
Silvex (2,4,5-TP)	93721			50							109 v	
Simazine	122349			4		10 CA 3.2 NZ		1 EU				
Styrene (Vinyl benzene)	100425	6	300	100		72 CA 32 V				4,690	300,000	300 D

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		Target	Intervention		Acute [3]	Chronic [3]	Acute [3]	Chronic [3]	Invertebrates [4]	Mammals [5]	Plants [6]	Other [7]
Tebuthiuron	34014181			490 BC		1.6 CA 2.2 NZ						
Temephos	3383968					0.05 NZ		0.05 NZ				
Tetrachloroaniline, 2,3,5,6-	3481207		< 10 S						20,000		20,000	
Tetrachlorobenzene, 1,2,3,4-	634662	< 0.01	< 2.5		250 *C	1.8 CA	160 *C	129 *C	10,000			< 30 D
Tetrachlorobenzene, 1,2,3,5-	634902	< 0.01	< 2.5		250 *C		160 *C	129 *C				< 30 D
Tetrachlorobenzene, 1,2,4,5-	95943	< 0.01	< 2.5		250 *C	50 *C 3 V	160 *C	129 *C		2,020		< 30 D
Tetrachlorobenzenes	na	0.01	2.5		250 *C	< 3 V	160 *C	129 *C	< 10,000	< 2,020		< 30 D
Tetrachloroethane, 1,1,1,2-	630206									225,000		
Tetrachloroethane, 1,1,2,2-	79345				2,100 T	111 CA	9,020 *	902 x 0.1		127		
Tetrachloroethylene (Tetrachloroethene; PCE; PER)	127184	0.01	40	5	830 T	98 T 45 V	10,200 *	450 *		9,920		2 D
Tetrachlorophenol, 2,3,4,5-	4901513	< 0.01	< 10			< 1 CA			20,000			< 10 D
Tetrachlorophenol, 2,3,4,6-	58902	< 0.01	< 10	100 C		20 NZ	440 *	44 x 0.1		199		< 10 D
Tetrachlorophenols (sum)	25167833	0.01	10			1 CA			< 20,000	< 199		< 10 D
Tetraethyldithiopyrophosphate	3689245									596		
Tetrahydrofuran	109999	0.5	300									100 D
Tetrahydrothiophene	110010	0.5	5,000									100 D
Thiobencarb	28249776					2.8 NZ						
Thiram	137268					0.2 NZ		0.01 NZ				
Toluene	108883	7	1,000	1,000	120 T	9.8 T 2 CA	6,300 *	215 CA		5,450	200,000	10 D
Toluidine [o-]	95534									2,970		
Toxaphene	8001352			3	0.73	0.0002	0.21	0.0002		119		
Triallate	2303175					0.24 CA						
Tributyltinoxide	56359	<0.05E-16 ng/L	< 0.7		0.46	0.072	0.42	0.0074				< 1 D
Trichloroaniline (multiple isomers)	na		10 S									
Trichloroaniline, 2,4,5-	636306		< 10 S						20,000		20,000	
Trichlorobenzene, 1,2,3-	87616	< 0.10	< 10			8.0 CA			20,000			< 30 D
Trichlorobenzene, 1,2,4-	120821	< 0.10	< 10	70	700 T	24 CA	160 *C	5.4 CA	20,000	11,100		< 30 D
Trichlorobenzenes	12002481	0.01	10	< 70	< 700 T	< 8 CA	160 *C	<5.4 CA	< 20,000	< 11,100		< 30 D

1: L – Environmental Risk Limit; S – Serious Contamination Level
3: p - proposed; * - LOEL; C - value for chemical class; S - value for summation of isomers; (½) - CMC is halved to compare to 1985 Guideline derivation; x 0.1 – chronic value derived by division of acute value by 10
7: M – microbes; A – avian



Screening Quick Reference Tables for Organic in Water and Soil

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ANALYTE All concentrations in parts per billion unless specified otherwise	CAS Number	GROUND WATER			SURFACE WATERS				SOIL			
		Dutch [1]		MCL [2]	Fresh		Marine					
		Target	Intervention		Acute [3]	Chronic [3]	Acute [3]	Chronic [3]	Invertebrates [4]	Mammals [5]	Plants [6]	Other [7]
Trichloroethane, 1,1,1-	71556	0.01	300	200	200 T	11 T	31,200 *	3,120 x 0.1		29,800		70 D
Trichloroethane, 1,1,2-	79005	0.01	130	5	5,200 T	1,200 T 500 V		1,900 NZ		28,600		400 D
Trichloroethene (TCE)		24	500	5		21 CA	2,000 *	200 x 0.1		12,400		100 D
Trichloroethene, 1,1,1-	71556	< 24	< 500	< 5	< 440 T	< 21 CA						< 100 D
Trichloroethene, 1,1,2-	79016	< 24	< 500	< 5	< 440 T	< 21 CA						< 100 D
Trichlorofluoromethane	75694				11,000 *C		12,000 *C	6,400 *C		16,400		
Trichlorophenol, 2,3,5-		< 0.03	< 10			< 18 CA						< 10 D
Trichlorophenol, 2,4,5-	95954	< 0.03	< 10		100 p	63 p	240 p	11 p	9,000	14,100	4,000	< 10 D
Trichlorophenol, 2,4,6-	88062	< 0.03	< 10	5 C		20 NZ 4.9 V			10,000	9,940		< 10 D
Triclorophenols, (sum)	na	0.03	10			18 CA			< 9,000	<9,940	< 4,000	< 10 D
Trichloropropane, 1,2,3-	96184									3,360		
Triethylphosphorothioate [O,O,O-]	126681									818		
Trifluralin	1582098			20 W		0.2 CA		0.1EU				
Trinitrobenzene, 1,3,5-	99354									376		
Trinitrotoluene, 2,4,6-	118967					140 NZ						
Vinyl acetate	108054				280 T	16 T				12,700		
Vinyl chloride	75014	0.01	5	2		930 V				646		10 D
Xylene, m-	108383	< 0.2	< 70		32 T	1.8 T Eco						< 100
Xylene, o-	95476	< 0.2	< 70			350 NZ						< 100
Xylene, p-		< 0.2	< 70									< 100
Xylenes	1330207	0.2	70	10,000	230 T	13 T					10,000 v	100 D

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3: p - proposed; * - LOEL; C - value for chemical class; S - value for summation of isomers; (½) - CMC is halved to compare to 1985 Guideline derivation; x 0.1 – chronic value derived by division of acute value by 10
7: M – microbes; A – avian



Screening Quick Reference Tables for Organic in Water and Soil

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Sources

1 – Entry is lower of current VROM Environmental Quality standards or the updated RIVM Environmental Risk Limits. Risk limits are typically divided by 100 to derive the Target value; this computation has been done here.
Dutch Target/Intervention: E.M.J. Verbruggen, R. Posthumus and A.P. van Wezel, 2001. Ecotoxicological Serious Risk Concentrations for soil, sediment, and (ground)water: updated proposal for first series of compounds. Nat. Inst. Public Health and the Env., and subsequent updates as published elsewhere.
Min. Housing, Spatial Plan. And the Env., 2000. Annexes Circular on target values and intervention values for soil remediations.

2 – Primary entry is the US EPA MCL value, followed by the lower of appropriate WHO, Canadian, or British Columbia guidelines.
Maximum Contaminant Levels (MCLs): http://www.epa.gov/safewater/index.html
W – World Health Organization's (WHO) Drinking water guidelines: http://www.who.int/water_sanitation_health/dwq/en/
C – Canadian Environmental Quality Guidelines for Community Water, Summary Table Update 2002: http://www.ccme.ca
BC – British Columbia Water Quality Guidelines (either working or recommended): http://www.env.gov.bc.ca/wat/wq/

3 – Primary entry is the US Ambient Water Quality Criteria, followed by the lowest of Tier II SAVs or available standards or guidelines.
Lowest Observable Effect Levels (LOELs) previously published by EPA are also included since these essentially were the basis for many state standards.
EPA Ambient water Quality Criteria (AWOC): http://www.epa.gov/waterscience/criteria/aqlife.html
T – Tier II Secondary Acute Value: http://www.esd.ornl.gov/programs/ecorisk/tools.html
Eco – EPA EcoUpdate, Ecotox Thresholds, EPA 540/F-95/038
CA – Canadian water Quality Guidelines: http://www.ec.gc.ca/CEQG-RCQE/English/Ceqg/Water/default.cfm
BC – British Columbia Water Quality Guidelines (either working or recommended): http://www.env.gov.bc.ca/wat/wq/
EU – European Union (EU) Environmental Quality Standards: COM(2006) 397 and 398 final.
V – US EPA Region V Ecological Screening Levels: http://www.epa.gov/reg5rcra/ca/edql.htm

4 – Toxicological Benchmarks for Effects on Earthworms: http://www.esd.ornl.gov/programs/ecorisk/tools.html
EPA – Eco-SSL for Invertebrates: http://www.epa.gov/ecotox/ecossl/
Region V Ecological Screening Level for Invertebrates: http://www.epa.gov/reg5rcra/ca/

5 – Entry is lower of either:
Region V Ecological Screening Level for shrew or vole: http://www.epa.gov/reg5rcra/ca/
EPA – Eco-SSL for Mammals: http://www.epa.gov/ecotox/ecossl/

6 – Toxicological Benchmarks for Effects on Terrestrial Plants: http://www.esd.ornl.gov/programs/ecorisk/tools.html
V – EPA Region V Ecological Screening Level for Plants: http://www.epa.gov/reg5rcra/ca/

7 – Entry is lower of either:
M – Toxicological Benchmarks for Effects on Microbes: http://www.esd.ornl.gov/programs/ecorisk/tools.html
A – Eco-SSL for Avian Receptors: http://www.epa.gov/ecotox/ecossl/
D – Entry is lower of current VROM Environmental Quality standards or the updated RIVM Environmental Risk Limits. See #1 above for sources.



Screening Quick Reference Table for PCB Composition

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Degree of Chlorination	A1221 Wt %	A1232 Wt %	A1016 Wt %	A1242 Wt %	A1248 Wt %	A1254 Wt %	A1260 Wt %	A1262 Wt %
Biphenyl	11.7 [a]	6.2 [a]						
∑1 Cl	65.5	31.3	Tr (#1, 3)	Tr (#1, 3)				
∑2 Cl	30.0	26.1	15.2	11.5	Tr (#7, 8)			
∑3 Cl	3.5	21.7	58.2	51.0	21.8	2.1		
∑4 Cl	Tr	15.0	26.5	29.0	60.2	14.3	Tr (#52, 70, 74)	Tr (#52, 70, 74)
∑5 Cl	Tr (#95)	5.8	Tr (#91, 95, 102)	8.5	17.1	53.2	8.2	3.5
∑6 Cl				Tr (#136, 138)	0.8	26.6	47.2	31.6
∑7 Cl					Tr	3.8	37.6	45.8
∑8 Cl						Tr (#202)	6.3	17.7
∑9 Cl							0.7	1.3
Total	99.1%	99.94%	99.95%	100%	99.93%	99.95%	100.01%	99.98%
Prominent congeners [b]	1 3 8 4 15 6	1 8 3 4 15 28	18 28 8 31 33 16	18 28 31 8 33 16	66 70 64 28 52 60	118 110 101 95 138 153	180 138 149 187 174 170	180 153187 149 174 203
Unique congener	#11 Tr					#137	#189 Tr	
Peak Range [c]	1-48	1-74	2-50	2-82	8-106	8-107	31.1-117	31.1-117
Ratio #118:203 [d]	Neither	No #203	Neither	No #203	73	370 - 1230	0.3 – 0.5	0.1
Ratio #31:118 [e]	No #118	4.3	No #118	8.5 - 9.2	2.1	0.01 – 0.04	0.1	No #31
Wt % of #153 [f]				0.1 - 0.14	Tr - 0.52	4.7-6.1	11.0 – 12.2	
Additional Information		~ 1:1 mix of 1221-1242	Distillation of 1242					

Notes

Commercial PCBs were manufactured by chlorination of biphenyl to produce complex mixtures (Aroclors in the USA and Great Britain, Clophens in Germany, or Kanechlors in Japan), each containing 60 to 90 different molecular species *(congeners)* and a specified weight percent of chlorine (for example, 54% in Aroclor 1254). There are 209 distinct congener structures possible, of which about 140 to 150 have been detected at significant levels in commercial PCBs.

Congener distributions in environmental samples roughly resemble those of the parent commercial mixtures, but are often modified due to evaporation, water extraction, microbial oxidation or dechlorination, photochemical dechlorination or differential biological uptake and metabolism. Compositional modification from original Aroclor patterns increases in biotic samples with trophic level. Still, it is often useful or necessary to attempt distinguishing the parent mixture released. The following information is presented to provide assistance with initial, preliminary evaluation of Aroclor. *Aroclor assignment should be conducted only by qualified chemists.*

Total PCBs can be characterized by two primary methods – the sum of congeners, or, the sum of estimates of individual Aroclor concentrations. In lower trophic level samples, these two methods provide approximately equal estimates of total PCBs. At higher trophic levels, analyses of samples tend to overestimate total PCBs by as much as 2-fold using the sum of Aroclor method, due to an overestimation of Aroclor 1254.

Tr - Individual congeners are at trace levels - 0.05 to 0.5% each - and are not included in totals.
- Refers to IUPAC congener number. IUPAC #s 107, 108, 109, 199, 200, 201 correspond to BZ#s 108, 109, 107, 201, 199, and 200, respectively.
a – Biphenyl figures are not reflected in congener weight percentages.
b – The six most prominent peaks listed by IUPAC congener number.
c – In the 118 peak numbering system, peak 1 is biphenyl.
d – This ratio is often used as an indicator for Aroclor 1260.
e – This ratio is often used as an indicator for Aroclor 1248.
f – Congener 153 is persistent in biota and abundantly present in higher chlorinated Aroclors and so provides a degree of modification estimate for biotic samples (increasing modification with decreasing PD values):

$$PD_{153} = \left[\frac{\#153_{theory} - \#153_{sample}}{\#153_{sample}}\right] * 100$$



Screening Quick Reference Table for Toxic Equivalency Factors

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Compound	2005 Mammals / human TEF	1998 Fish TEF	1998 Avian TEF
CHLORINATED DIBENZO-P-DIOXINS			
2,3,7,8-TCDD	1	1	1
1,2,3,7,8-PeCDD	1	1	1
1,2,3,4,7,8-HxCDD	0.1	0.5	0.05
1,2,3,6,7,8-HxCDD	0.1	0.01	0.01
1,2,3,7,8,9-HxCDD	0.1	0.01	0.1
1,2,3,4,6,7,8-HpCDD	0.01	0.001	<0.001
OCDD	0.0003	<0.0001	< 0.0001
CHLORINATED DIBENZOFURANS			
2,3,7,8-TCDF	0.1	0.05	1
1,2,3,7,8-PeCDF	0.03	0.05	0.1
2,3,4,7,8-PeCDF	0.3	0.5	1
1,2,3,4,7,8-HxCDF	0.1	0.1	0.1
1,2,3,6,7,8-HxCDF	0.1	0.1	0.1
1,2,3,7,8,9-HxCDF	0.1	0.1	0.1
2,3,4,6,7,8-HxCDF	0.1	0.1	0.1
1,2,3,4,6,7,8-HpCDF	0.01	0.01	0.01
1,2,3,4,7,8,9-HpCDF	0.01	0.01	0.01
OCDF	0.0003	<0.0001	0.0001
NON-ORTHO-SUBSTITUTED PCBS			
3,3#,4,4#-tetraCB (PCB 77)	0.0001	0.0001	0.05
3,4,4#,5-tetraCB (PCB 81)	0.0003	0.0005	0.1
3,3#,4,4#,5-pentaCB (PCB 126)	0.1	0.005	0.1
3,3#,4,4#,5,5#-hexaCB (PCB 169)	0.03	0.00005	0.001
MONO-ORTHO-SUBSTITUTED PCBs			
2,3,3#, 4,4#-pentaCB (PCB 105)	0.00003	<0.000005	0.0001
2,3,4,4#,5-pentaCB (PCB 114)	0.00003	<0.000005	0.0001
2,3#,4,4#,5-pentaCB (PCB 118)	0.00003	<0.000005	0.00001
2# ,3,4,4# ,5-pentaCB (PCB 123)	0.00003	<0.000005	0.00001
2,3,3#, 4,4#,5-hexaCB (PCB 156)	0.00003	<0.000005	0.0001
2,3,3#,4,4#,5#-hexaCB (PCB 157)	0.00003	<0.000005	0.0001
2,3#,4,4#,5,5#-hexaCB (PCB 167)	0.00003	<0.000005	0.00001
2,3,3#, 4,4#, 5,5#-heptaCB (PCB 189)	0.00003	<0.000005	0.00001

It has been well established that 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD), and other chlorinated dioxins, furans, and even PCBs with a similar planar chemical structures are capable of inducing similar toxicity, such as carcinogenicity. Since these compounds generally are observed in mixtures, it is desirable to be able to express the cumulative, overall toxicity of the mixture. However, since each of these congeners does not exhibit the same degree, or potency, of toxicity, some manipulations of raw concentrations are required to express total toxicity.

A number of systems have been developed to express the total, overall toxicity from mixtures of these chemicals. Most commonly, the potency of each congener is weighted relative to a standard, generally the most potent congener. For dioxins and furans, 2,3,7,8-TCDD is the common standard which is given a reference value of one. The weighting, or potency factor, is called a Toxic Equivalency Factor (TEF). When cumulative results are reported, the absolute concentration of each congener is multiplied by its corresponding TEF to derive a TCDD-equivalency. These values are then summed together to give a total Toxic Equivalency Quotient, or TEQ.

The TEQ scheme refers ***only*** to adverse effects (e.g., cancer) following interactions with certain cellular enzyme systems (the Ah receptors). Other toxic effects of dioxins and dioxin-like compounds are not quantified by this method. Because they involve potency to specific enzyme systems, TEF values vary for different animal species.

There are two main schemes:

The two most common systems for determining TEQs are:

1) **I-TEF and I-TEQ:** The older International Toxic Equivalent (I-TEQ) scheme by the North Atlantic Treaty Organization (NATO) initially set up in 1989 and later extended and updated.

2) **WHO-TEF and WHO-TEQ** (also referred to as TEF or TEQ): More recently, the World Health Organization (WHO) suggested modified Toxic Equivalency Factor (TEF) values for human risk assessment.

ITEQs are most common in North America, while Asia and Europe tend to use WHO-TEQs. On average, the result of TEQ-calculations is about 10% higher when I-TEFs are used compared to when WHO-TEFs are used.

Potency in fish reflects mainly rainbow trout: potency for birds is mainly derived from chickens.

Sources

Van den Berg, M., and others. 1998. “Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, and PCDFs for Humans and Wildlife.” *Environmental Health Perspectives*. Volume 106. Pages 775 - 792.

Van den Berg, M., and others. 2006. “The 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds.” *Toxicological Sciences* 93(2):223-241.

Screening Quick Reference Tables for Composition by Carbon Range

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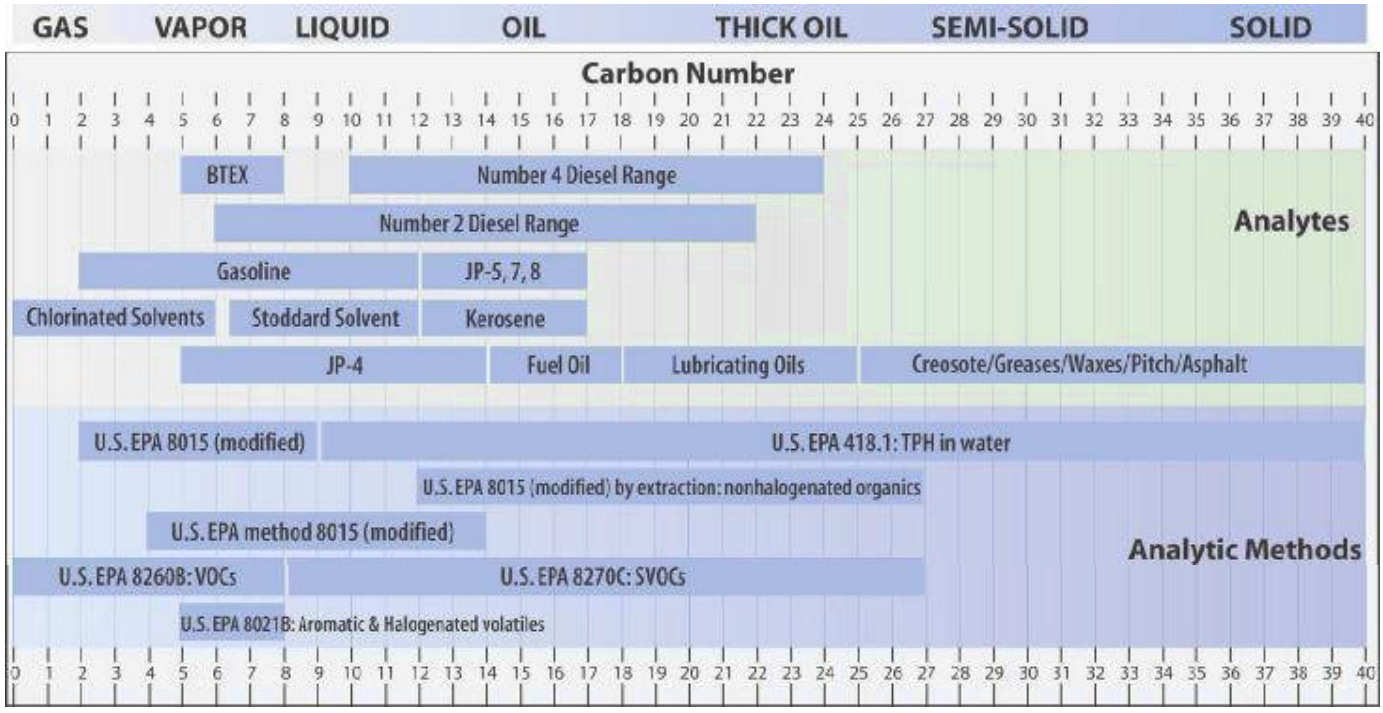

Carbon ranges are approximate: actual carbon ranges for a specific product are dependent upon the distillation process of the exact source.

Analytic Methods generally refer to EPA SW-846 methods (www.epa.gov/SW-846/index.htm)

Screening Quick Reference Tables for Sample Collection and Storage

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MATERIAL	CONTAINER	PRESERVATION	MAXIMUM HOLDING TIME	SAMPLE SIZE
INORGANICS				
Chromium^{+6} (Cr^{+6})	P,G	Cool, 4ºC	24 hours	400 mL/200 g
Mercury (Hg)	P,G	HNO_3, to pH <2	28 days	400 mL/200 g
Metals, except Cr^{+6} and Hg	P,G	HNO_3, to pH <2	6 months	600 mL/200 g
Cyanide by method no. 9010	P,G	Cool 4ºC, pH >12 See method 9010	14 days	1,000 mL
Alpha, Beta, and Radium Radiation	P,G	HNO_3 to pH <2	6 months	1,000 mL
ORGANICS				
Benzidines	G, TLC	Cool, 4ºC	7 days until extraction, 40 days after extraction	1,000 mL
Chlorinated Hydrocarbons	G, TLC	Cool, 4ºC[3]	7 days until extraction, 40 days after extraction	1,000 mL
Dioxins and Furans	G, TLC	Cool, 4ºC[3]	30 days until extraction, 45 days after extraction	1,000 mL
Haloethers	G, TLC	Cool, 4ºC[3]	7 days until extraction, 40 days after extraction	1,000 mL
Nitrites	G, TLC	Cool, 4ºC[3]	14 days	
Nitrosamines	G, TLC	Cool, 4ºC[3]	7 days until extraction, 40 days after extraction	1,000 mL
Nitroaromatics and Cyclic Ketones	G, TLC	Cool, 4ºC[3]	7 days until extraction, 40 days after extraction	1,000 mL
OIL And GREASE	G	Cool, 4ºC[2]	28 days	1,000 mL
TOTAL Organic Carbon, By Method No. 9060	P,G	Cool, 4ºC[2] store in the dark	28 days	100 mL
TOTAL Organic Halides By Method No. 9020/9021	G, TLC	Cool, 4ºC[2]	28 days	500 mL
PCBs	G, TLC	Cool, 4ºC	7 days until extraction, 40 days after extraction	1,000 mL/250 mL
Pesticides	G, TLC	Cool 4ºC,	7 days until extraction, 40 days after extraction	1,000 mL/250 mL
Phenols	G, TLC	Cool, 4ºC[3]	7 days until extraction, 40 days after extraction	1,000 mL
Phthalate Esters	G, TLC	Cool, 4ºC	7 days until extraction, 40 days after extraction	1,000 mL
Polynuclear Aromatic Hydrocarbons	G, TLC	Cool, 4ºC[3] store in the dark	7 days until extraction, 40 days after extraction	1,000 mL/250 mL
Purgeable Aromatic Hydrocarbons	VOA	Cool, 4ºC[2,3]	14 days	40 mL
Purgeable Halocarbons	VOA	Cool, 4ºC[3]	14 days	40 mL

Sources

EPA SW846

1 P - Polyethylene; G - Amber glass containers; TLC - Teflon-lined cap; VOA - Volatile organic analyte vial of amber glass with teflon-lined septum.
2 Adjust to pH <2 with H_2SO_4, HCl, or solid $NaHSO_4$
3 Free chlorine must be removed before addition of HCl by exact addition of $Na_2S_2O_3$



Screening Quick Reference Table
Options for Selection of Analytical Methods: Inorganics

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TRACE ELEMENT	OTHER [1]	FLAME AA	FURNANCE AA	ICP	EXTRACTION METHODS	
					WATER	SOIL/SEDIMENT
Aluminum (Al)	6800	7020		6010B 6020A	3005A 3010A 3015A	3050B 3051A
Antimony (Sb)	6200(55) 6800	7040	7041 7062 [3]	6010B 6020A	3005A 3015A	3050B 3051A
Arsenic (As)	6200(60) 7063 7061A [3]		7060 7062 [3]	6010B 6020A	3005A 3010A 3015A 7063	3050B 3051A
Barium (Ba)	6200(60) 6800	7080A	7081 [3]	6010B 6020A	3005A 3010A 3015A	3050B 3051A
Beryllium (Be)		7090	7091	6010B 6020A	3005A 3010A 3015A 3020A	3050B 3051A
Cadmium (Cd)	6200 6800	7130	7131A	6010B 6020A	3005A 3010A 3015A 3020A	3050B 3051A
Calcium (Ca)	6200 6800	7140		6010B 6020A	3005A 3010A 3015A	3050B 3051A
Chromium (CR), total	6200(200) 6800	7190	7191	6010B 6020A	3005A 3010A 3015A 3020A	3050B 3051A
Chromium+6 (Cr+6)	7195 — 7199 [3]				7195 - 7199	3060A
Cobalt (Co)	6200(330)	7200	7201	6010B 6020A	3005A 3010A 3015A 3020A	3050B 3051A
Copper (Cu)	6200(85) 6800	7210	7211 [3]	6010B 6020A	3005A 3010A 3015A	3050B 3051A
Iron (Fe)	6200 6 800	7380	7381 [3]	6010B 6020A	3005A 3010A 3015A	3050B 3051A
Lead (Pb)	6200(45) 6800	7420	7421	6010B 6020A	3005A 3010A 3015A 3020A	3051A
Magnesium (Mg)	6800	7450		6010B 6020A	3005A 3010A 3015A	3050B 3051A
Manganese (Mn)	6200(240)	7460	7461	6010B 6020A	3005A 3010A 3015A	3050B 3051A
Mercury (Hg)	4500(0.5) 6200 6800 7470A 7471B 7472 7473 7474 [3]			6020A	7470A 7472 3015A	3051A 7471B 7473 7474
Molybdenum (Mo)	6200(25) 6800	7480	7481	6010B	3005A 3010A 3015A 3020A	3050B 3051A
Nickel (Ni)	6200(100) 6800	7520	7521	6010B 6020A	3005A 3010A 3015A	3050B 3051A
Potassium (K)	6200 6800	7610		6010B 6020A	3005A 3010A 3015A	3050B 3051A
Selenium (Se)	6200 6800 7741A 7742 [3]		7740	6010B 6020A	3005A 3010A 3015A	3050B 3051A
Silver (Ag)	6200 6800	7760A	7761 [3]	6010B 6020A	3005A 3015A	3051A 7760 7761
Sodium (Na)		7770		6010B 6020A	3005A 3010A 3015A	3050B 3051A
Strontium (Sr)	6200(30) 6800	7780		6010B	3015A	3050B 3051A
Thallium (Tl)	6200 6800	7840	7841	6010B 6020A	3005A 3010A 3015A 3020A	3050B 3051A
Tin (Sn)	6200(85)	7870				
Vanadium (V)	6200 6800	7910	7911	6010B 6020A	3005A 3010A 3015A 3020A	3050B 3051A
Zinc (Zn)	6200(80) 6800	7950	7951 [3]	6010B 6020A	3005A 3010A 3015A	3050B 3051A
Cyanide (HCN)	9010B — 9014 [3]					

Sources

All method numbers refer to EPA SW-846, Volume III with changes as proposed for Volume IV.
ICP's advantage is that it allows simultaneous or rapid sequential determination of many elements, but suffers from interferences. AA determinations are normally completed as single element analyses. ICP and Flame AA have comparable detection limits (within a factor of 4), but ICP-MS (6020A) can drastically improve the detection limits (e.g., an order of magnitude lower). Furnace AA generally exhibits lower detection limits than ICP or Flame-AA, and offers more control over unwanted matrix components. X-RAY and immunoassays allow field determinations.

1 Method 6200 is Portable X-Ray; 6800 is Elemental/Isotope Mass Spec.; 4500 is Immunoassay; 7063 is ASV; where available, soil detection limits in ppm are in parentheses.
2 Except as noted, most individual procedures are proposed to be integrated into Method 7000B or 7010.
3 Includes various methods. Follow the extraction procedure detailed in the individual determinative method.



Screening Quick Reference Table
Options for Selection of Analytical Methods: Organics

These tables were developed for screening purposes only: they do not represent official NOAA policy and do not constitute criteria or clean-up levels.
All attempts have been made to ensure accuracy; however, NOAA is not liable for errors. Values are subject to changes as new data become available.

COMPOUNDS	FIELD METHODS	OC/MS METHOD	SPECIFIC DETECTION METHOD	HPLC METHOD	EXTRACTION METHODS WATER	EXTRACTION METHODS SOIL/SEDIMENT	CLEANUP METHOD
Aromatic and Halogenated Volatiles		8260B	8021B		5021 5030B 5032	5021 5032 5035	
Carbamates				8318 8321B	8318 8321B	8318 8321B	8318
Chlorinated Dioxins and Furans			8280B 8290A		8280B 8290A	8280B 8290A 3545A	8280B 8290A
Chlorinated Hydrocarbons		8270D	8121		3510C 3520C 3535A	3540C 3550B	3620B 3640A
Chlorinated Phenoxyacids	4015 (0.1 ppm)	8270D 2	8151A	8321B	8151A 8321B 3535A	8321B 8151A 3545A 3580A	8151A 3620B
Haloethers		8270D	8111		3510C 3520C	3540C 3545 3550B	3620B 3640A
Nitriles and Amides		8260B	8031 8032A 8033	8315 8316	5030B — 5032 8031 8032A 8316	5031 5032 5035	8032A
Nitroaromatics and Ketones		8270D	8091	8330A	3510C 3520C 3535A	3540C 3545 3550B	3620B 3640A
Nitroaromatics (Explosives)	4050 (0.5 ppm) 4051 8515 (1 ppm)			8330A - 8332	8330A — 8332	8330A — 8332	8330A — 8332 3620B
Nitrosamines		8270D	8070A		3510C 3520C 8070A	3540C 3545 3550B 8070A	3610B 3620B 3640A 8070A
Non-Halogenated Volatiles		8260B	8015B		5030B — 5032	5021 5031 5032 5035	
Organochlorines	4040 — 4042 (0.2 to 20 ppm)	8270D 2	8081B 8275A		3510C 3520C 3535A	3540C 3545A 3550B 3562	3620B 3630C 3640A 3660
Organophosphates		8270D 2	8141B	8321B	3510C 3520C 3535A	3540C 3545A 3550B	3620B
PAHs	4035 (1 ppm)	8270D	8100 8275A	8310	3510C 3520C	3540C 3545 3550B 3561	3610B 3630 3640A 3650B
PCBs	4020 (5 ppm) 9078 (2 ppm)	8270D 2	8082A 8275A		3510C 3520C 3535A	3540C 3545A 3550B 3665A 3562	3620B 3630C 3640A 3660 3665A
Phenolics	4010A (0.5 ppm)	8270D	8041		3510C 3520C	3540C 3545 3550B	3630 3640A 3650B 8041
Phthalates		8270D	8061A		3510C 3520C 3535A	3540C 3545 3550B	3610B 3620B 3640A
Semi-Volatile Organics		8270D			3510C 3520C 3535A	3540C 3545A 3550B	3640A 3650B 3660
Total Organic Halides (TOX)			9020B 9022		9020B 9022		
Total Petroleum Hydrocarbons	4030 (5 ppm) 9074		8015B				
Volatile Organics		8260B	8015B 8021B		5030B — 5032	5021 5031 5032 5035	

Sources

All method numbers refer to EPA SW-846, Update III, with changes as proposed in Update IV.

Options shown are generally for chemical classes; more detailed information may be available for specific compounds

GC/MS methods allow for scanning a broad range of volatile and semi-volatile compounds, but suffer from interference and higher detection limits.

Specific determination methods and HPLC methods allow for more precise determinations of specific compounds of interest.

1 Series 4000 are immunoassays and are for specific compounds within these classes (i.e., 2,4-D, TNT, RDX, and PCP). Soil detection limits are in parentheses.
2 This is not a method of choice, but rather a confirmatory method.



Screening Quick Reference Tables

These tables were developed for screening purposes only: they do not represent official NOAA policy and do not constitute criteria or clean-up levels.
All attempts have been made to ensure accuracy; however, NOAA is not liable for errors. Values are subject to changes as new data become available.

Because trace elements are naturally occurring compounds, concentrations reflective of non-anthropogenically impacted, or "background," are provided in addition to toxicological benchmarks. For screening, trace element levels may be compared to the geometric mean (and range) observed in natural soils in the U.S. Further comparisons to regional values is encouraged.

Promulgated criteria or standards for sediments or soils are generally not available in the U.S. For screening purposes, contaminant levels in solids (sediment or soil) may be compared to benchmarks representative of different characterizations of ecological risk. They should ***not*** be applied without a reasonable understanding of their development, their performance, and their limitations.

The NOAA SQuiRTs include multiple sediment screening values to help portray a spectrum of concentrations which have been associated with various probabilities of adverse biological effects. This spectrum ranges from presumably nearly non-toxic to toxic levels. For instance, if all analytes screen below lower-threshold values (for example, TELs), this suggests, with a high degree of confidence, that a sample with these levels of contaminants has a low probability of being toxic, as tested through standard bioassays. Conversely, exceeding lower thresholds does ***not*** necessarily predict toxicity. Comparison to higher toxicity thresholds (for example, PELs) identifies compounds which are more probably present at elevated, toxic levels.

Sources of benchmarks for sediment were chosen primarily on the basis of representing a fairly unique approach for their derivation. A major exception is the "Consensus TEC/PEC" values: these values are simply averages of other existing benchmarks (mostly those appearing in the SQuiRT cards). The consensus TEC/PECs are provided here merely as a service.

For soil- and sediment-associated contaminants, dry weight concentrations are screened directly against published benchmarks. Some benchmarks are available only on a Total Organic Carbon (TOC) normalized basis, and are footnoted as such. Separate values are provided for either freshwater and estuarine or marine sediments.

For freshwater sediments, the Upper Effects Threshold (UET) was derived by NOAA as the lowest AET from a compilation of endpoint analogous to the marine AET endpoints. The UETs for organic contaminants are generally listed for a sediment containing 1% TOC.

This version of the SQuiRT cards adds a section on the composition of PCBs. A characterization of Aroclors by their degree of chlorination and congener patterns may aid in *preliminary* exploration of source type. Definitive Aroclor assignment should only be conducted by a qualified chemist.

To express cumulative toxicity from mixtures of dioxins and furans, Toxic Equivalency Factors are included in this version of the SQuiRT cards. Absolute concentrations can be multiplied by the TEF potency factors and the products then summed to derive total toxicity.

Every effort has been made to ensure accuracy in these SQuiRT cards. However, NOAA is not liable for errors in original sources or revision of values. These screening values are subject to change as new data become available. The SQuiRT cards may be freely reproduced and distributed, if they are distributed in their entirety, without modification, and properly credited to NOAA.

The SQuiRT cards should be cited as:

"Buchman, M. F., 2008. NOAA Screening Quick Reference Tables, NOAA OR&R Report 08-1, Seattle WA, Office of Response and Restoriation Division, National Oceanic and Atmospheric Administration, 34 pages."

2018

GROUNDWATER

LABORATORY

ANALYTICAL DATA

PHOENIX
Environmental Laboratories, Inc.

Monday, June 11, 2018

Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Project ID: ROCKVILLE MGP
Sample ID#s: CA61339 - CA61344

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.

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

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

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

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

Analysis Report

June 11, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/30/18	10:25
Location Code:	TIGHE-DAS	Received by:	DL	05/30/18	17:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14075544B				

Laboratory Data

SDG ID: GCA61339
Phoenix ID: CA61339

Project ID: ROCKVILLE MGP
Client ID: MW-3BR

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Arsenic	< 0.004	0.004	mg/L	1	06/01/18	EK	SW6010C
Barium	0.207	0.002	mg/L	1	06/01/18	EK	SW6010C
Beryllium	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Cadmium	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Chromium	0.007	0.001	mg/L	1	06/01/18	EK	SW6010C
Copper	< 0.005	0.005	mg/L	1	06/01/18	EK	SW6010C
Mercury	< 0.0002	0.0002	mg/L	1	06/01/18	RS	SW7470A
Nickel	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Lead	0.003	0.002	mg/L	1	06/01/18	EK	SW6010C
Antimony	< 0.0030	0.0030	mg/L	5	06/01/18	PS	SW6020B
Selenium	< 0.02	0.02	mg/L	1	06/01/18	EK	SW6010C
Thallium	< 0.0005	0.0005	mg/L	5	06/01/18	CPP	SW6020B
Vanadium	< 0.002	0.002	mg/L	1	06/01/18	EK	SW6010C
Zinc	< 0.002	0.002	mg/L	1	06/01/18	EK	SW6010C
Total Cyanide	< 0.010	0.010	mg/L	1	06/05/18	O/GD	SW9010C/SW9012B
Extraction of CT ETPH	Completed				06/04/18	P/D	SW3510C/SW3520C
Mercury Digestion	Completed				05/31/18	I/I	SW7470A
Semi-Volatile Extraction	Completed				05/31/18	P/R	SW3520C
Total Metals Digestion	Completed				05/31/18	AG	
Total Metals Digestion MS	Completed				05/31/18	AG	
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	0.066	mg/L	1	06/05/18	JRB	CTETPH 8015D
Identification	ND		mg/L	1	06/05/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	65		%	1	06/05/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-3BR

Phoenix I.D.: CA61339

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	06/05/18	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	06/05/18	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	06/05/18	MH	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	06/05/18	MH	SW8260C
Acetone	ND	25	ug/L	1	06/05/18	MH	SW8260C
Acrylonitrile	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Benzene	1.2	0.70	ug/L	1	06/05/18	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	06/05/18	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Carbon Disulfide	5.1	5.0	ug/L	1	06/05/18	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	06/05/18	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	06/05/18	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Ethylbenzene	1.2	1.0	ug/L	1	06/05/18	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	06/05/18	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-3BR

Phoenix I.D.: CA61339

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	06/05/18	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Naphthalene	1.3	1.0	ug/L	1	06/05/18	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Styrene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	06/05/18	MH	SW8260C
Toluene	3.5	1.0	ug/L	1	06/05/18	MH	SW8260C
Total Xylenes	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	06/05/18	MH	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	06/05/18	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	06/05/18	MH	70 - 130 %
% Bromofluorobenzene	108		%	1	06/05/18	MH	70 - 130 %
% Dibromofluoromethane	115		%	1	06/05/18	MH	70 - 130 %
% Toluene-d8	114		%	1	06/05/18	MH	70 - 130 %
Semivolatiles							
1,2,4-Trichlorobenzene	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
1,2-Dichlorobenzene	ND	2.4	ug/L	1	06/04/18	KCA	SW8270D
1,2-Diphenylhydrazine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
1,3-Dichlorobenzene	ND	2.4	ug/L	1	06/04/18	KCA	SW8270D
1,4-Dichlorobenzene	ND	2.4	ug/L	1	06/04/18	KCA	SW8270D
2,4,5-Trichlorophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2,4,6-Trichlorophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2,4-Dichlorophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2,4-Dimethylphenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2,4-Dinitrophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2,4-Dinitrotoluene	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
2,6-Dinitrotoluene	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
2-Chloronaphthalene	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
2-Chlorophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2-Nitroaniline	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
2-Nitrophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	9.4	ug/L	1	06/04/18	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
3-Nitroaniline	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-3BR

Phoenix I.D.: CA61339

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4,6-Dinitro-2-methylphenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
4-Chloro-3-methylphenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
4-Chloroaniline	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
4-Nitroaniline	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
4-Nitrophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
Acetophenone	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Aniline	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Benzidine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Benzoic acid	ND	47	ug/L	1	06/04/18	KCA	SW8270D
Benzyl butyl phthalate	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Carbazole	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Diethyl phthalate	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Dimethylphthalate	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Di-n-butylphthalate	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Di-n-octylphthalate	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Isophorone	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
N-Nitrosodimethylamine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
N-Nitrosodiphenylamine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Phenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	85		%	1	06/04/18	KCA	15 - 110 %
% 2-Fluorobiphenyl	73		%	1	06/04/18	KCA	30 - 130 %
% 2-Fluorophenol	45		%	1	06/04/18	KCA	15 - 110 %
% Nitrobenzene-d5	65		%	1	06/04/18	KCA	30 - 130 %
% Phenol-d5	55		%	1	06/04/18	KCA	15 - 110 %
% Terphenyl-d14	74		%	1	06/04/18	KCA	30 - 130 %
Semivolatiles (SIM)							
1,2,4,5-Tetrachlorobenzene	ND	0.47	ug/L	1	06/04/18	DD	SW8270D (SIM)
2-Methylnaphthalene	ND	0.94	ug/L	1	06/04/18	DD	SW8270D (SIM)
Acenaphthene	0.35	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Acenaphthylene	0.13	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Anthracene	0.08	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Benz(a)anthracene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Benzo(a)pyrene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.19	ug/L	1	06/04/18	DD	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Bis(2-ethylhexyl)phthalate	ND	0.47	ug/L	1	06/04/18	DD	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.01	ug/L	1	06/04/18	DD	SW8270D (SIM)
Dibenzofuran	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Fluoranthene	0.16	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	06/04/18	DD	SW8270D (SIM)

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-3BR

Phoenix I.D.: CA61339

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Hexachlorobenzene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Hexachlorobutadiene	ND	0.47	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Hexachlorocyclopentadiene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Hexachloroethane	ND	0.47	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Naphthalene	0.16	0.09	ug/L	1	06/04/18	DD	SW8270D (SIM)	B*
Nitrobenzene	ND	0.09	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Pentachloronitrobenzene	ND	0.09	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Pentachlorophenol	ND	0.75	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Phenanthrene	0.06	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Pyrene	0.26	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Pyridine	ND	0.47	ug/L	1	06/04/18	DD	SW8270D (SIM)	
QA/QC Surrogates								
% 2,4,6-Tribromophenol	70		%	1	06/04/18	DD	15 - 110 %	
% 2-Fluorobiphenyl	63		%	1	06/04/18	DD	30 - 130 %	
% 2-Fluorophenol	50		%	1	06/04/18	DD	15 - 110 %	
% Nitrobenzene-d5	84		%	1	06/04/18	DD	30 - 130 %	
% Phenol-d5	71		%	1	06/04/18	DD	15 - 110 %	
% Terphenyl-d14	88		%	1	06/04/18	DD	30 - 130 %	

B* = Present in blank, a bias is possible.

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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
June 11, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

June 11, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/30/18	9:08
Location Code:	TIGHE-DAS	Received by:	DL	05/30/18	17:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14075544B				

Laboratory Data

SDG ID: GCA61339
Phoenix ID: CA61340

Project ID: ROCKVILLE MGP
Client ID: MW-18D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Arsenic	< 0.004	0.004	mg/L	1	06/01/18	EK	SW6010C
Barium	0.111	0.002	mg/L	1	06/01/18	EK	SW6010C
Beryllium	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Cadmium	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Chromium	0.002	0.001	mg/L	1	06/01/18	EK	SW6010C
Copper	< 0.005	0.005	mg/L	1	06/01/18	EK	SW6010C
Mercury	< 0.0002	0.0002	mg/L	1	06/01/18	RS	SW7470A
Nickel	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Lead	< 0.002	0.002	mg/L	1	06/01/18	EK	SW6010C
Antimony	< 0.05	0.05	mg/L	1	06/01/18	MA	SW6010C
Selenium	< 0.02	0.02	mg/L	1	06/01/18	MA	SW6010C
Thallium	< 0.0005	0.0005	mg/L	5	06/01/18	CPP	SW6020B
Vanadium	< 0.002	0.002	mg/L	1	06/01/18	EK	SW6010C
Zinc	0.003	0.002	mg/L	1	06/01/18	EK	SW6010C
Total Cyanide	< 0.010	0.010	mg/L	1	06/05/18	O/GD	SW9010C/SW9012B
Extraction of CT ETPH	Completed				06/04/18	P/D	SW3510C/SW3520C
Mercury Digestion	Completed				05/31/18	I/I	SW7470A
Semi-Volatile Extraction	Completed				05/31/18	P/R	SW3520C
Total Metals Digestion	Completed				05/31/18	AG	
Total Metals Digestion MS	Completed				05/31/18	AG	
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	0.89	0.066	mg/L	1	06/05/18	JRB	CTETPH 8015D
Identification	**		mg/L	1	06/05/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	70		%	1	06/05/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-18D

Phoenix I.D.: CA61340

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	06/05/18	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
1,1-Dichloroethane	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	2	06/05/18	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
1,2,3-Trichloropropane	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
1,2,4-Trimethylbenzene	16	2.0	ug/L	2	06/05/18	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.1	ug/L	2	06/05/18	MH	SW8260C
1,2-Dibromoethane	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	06/05/18	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
1,3,5-Trimethylbenzene	5.9	2.0	ug/L	2	06/05/18	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	06/05/18	MH	SW8260C
2-Isopropyltoluene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	06/05/18	MH	SW8260C
Acetone	ND	50	ug/L	2	06/05/18	MH	SW8260C
Acrylonitrile	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Benzene	190	14	ug/L	20	06/05/18	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	06/05/18	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	06/05/18	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Chloroform	6.1	2.0	ug/L	2	06/05/18	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
cis-1,2-Dichloroethene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.80	ug/L	2	06/05/18	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	06/05/18	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Ethylbenzene	84	20	ug/L	20	06/05/18	MH	SW8260C
Hexachlorobutadiene	ND	0.80	ug/L	2	06/05/18	MH	SW8260C
Isopropylbenzene	3.8	2.0	ug/L	2	06/05/18	MH	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-18D

Phoenix I.D.: CA61340

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	48	2.0	ug/L	2	06/05/18	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	06/05/18	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Naphthalene	290	20	ug/L	20	06/05/18	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
o-Xylene	57	2.0	ug/L	2	06/05/18	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Styrene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Tetrachloroethene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	06/05/18	MH	SW8260C
Toluene	250	20	ug/L	20	06/05/18	MH	SW8260C
Total Xylenes	105.0	2.0	ug/L	2	06/05/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.80	ug/L	2	06/05/18	MH	SW8260C
trans-1,4-dichloro-2-butene	ND	10	ug/L	2	06/05/18	MH	SW8260C
Trichloroethene	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
Vinyl chloride	ND	2.0	ug/L	2	06/05/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	106		%	2	06/05/18	MH	70 - 130 %
% Bromofluorobenzene	109		%	2	06/05/18	MH	70 - 130 %
% Dibromofluoromethane	120		%	2	06/05/18	MH	70 - 130 %
% Toluene-d8	111		%	2	06/05/18	MH	70 - 130 %
Semivolatiles							
1,2,4-Trichlorobenzene	ND	6.7	ug/L	2	06/04/18	PS	SW8270D
1,2-Dichlorobenzene	ND	4.8	ug/L	2	06/04/18	PS	SW8270D
1,2-Diphenylhydrazine	ND	6.0	ug/L	2	06/04/18	PS	SW8270D
1,3-Dichlorobenzene	ND	4.8	ug/L	2	06/04/18	PS	SW8270D
1,4-Dichlorobenzene	ND	4.8	ug/L	2	06/04/18	PS	SW8270D
2,4,5-Trichlorophenol	ND	1.9	ug/L	2	06/04/18	PS	SW8270D
2,4,6-Trichlorophenol	ND	1.9	ug/L	2	06/04/18	PS	SW8270D
2,4-Dichlorophenol	ND	1.9	ug/L	2	06/04/18	PS	SW8270D
2,4-Dimethylphenol	ND	1.9	ug/L	2	06/04/18	PS	SW8270D
2,4-Dinitrophenol	ND	1.9	ug/L	2	06/04/18	PS	SW8270D
2,4-Dinitrotoluene	ND	9.6	ug/L	2	06/04/18	PS	SW8270D
2,6-Dinitrotoluene	ND	9.6	ug/L	2	06/04/18	PS	SW8270D
2-Chloronaphthalene	ND	9.6	ug/L	2	06/04/18	PS	SW8270D
2-Chlorophenol	ND	1.9	ug/L	2	06/04/18	PS	SW8270D
2-Methylphenol (o-cresol)	2.2	1.9	ug/L	2	06/04/18	PS	SW8270D
2-Nitroaniline	ND	9.6	ug/L	2	06/04/18	PS	SW8270D
2-Nitrophenol	ND	1.9	ug/L	2	06/04/18	PS	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	19	ug/L	2	06/04/18	PS	SW8270D
3,3'-Dichlorobenzidine	ND	5.0	ug/L	2	06/04/18	PS	SW8270D
3-Nitroaniline	ND	9.6	ug/L	2	06/04/18	PS	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-18D

Phoenix I.D.: CA61340

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
4,6-Dinitro-2-methylphenol	ND	1.9	ug/L	2	06/04/18	PS	SW8270D	
4-Bromophenyl phenyl ether	ND	9.6	ug/L	2	06/04/18	PS	SW8270D	
4-Chloro-3-methylphenol	ND	1.9	ug/L	2	06/04/18	PS	SW8270D	
4-Chloroaniline	ND	6.7	ug/L	2	06/04/18	PS	SW8270D	
4-Chlorophenyl phenyl ether	ND	1.9	ug/L	2	06/04/18	PS	SW8270D	
4-Nitroaniline	ND	9.6	ug/L	2	06/04/18	PS	SW8270D	
4-Nitrophenol	ND	1.9	ug/L	2	06/04/18	PS	SW8270D	
Acenaphthene	14	9.6	ug/L	2	06/04/18	PS	SW8270D	
Acetophenone	ND	9.6	ug/L	2	06/04/18	PS	SW8270D	
Aniline	ND	9.6	ug/L	2	06/04/18	PS	SW8270D	
Benzidine	ND	5.0	ug/L	2	06/04/18	PS	SW8270D	
Benzoic acid	ND	96	ug/L	2	06/04/18	PS	SW8270D	
Benzyl butyl phthalate	ND	9.6	ug/L	2	06/04/18	PS	SW8270D	
Bis(2-chloroethoxy)methane	ND	9.6	ug/L	2	06/04/18	PS	SW8270D	
Bis(2-chloroethyl)ether	ND	1.9	ug/L	2	06/04/18	PS	SW8270D	
Bis(2-chloroisopropyl)ether	ND	9.6	ug/L	2	06/04/18	PS	SW8270D	
Carbazole	ND	9.6	ug/L	2	06/04/18	PS	SW8270D	
Diethyl phthalate	ND	9.6	ug/L	2	06/04/18	PS	SW8270D	
Dimethylphthalate	ND	9.6	ug/L	2	06/04/18	PS	SW8270D	
Di-n-butylphthalate	ND	9.6	ug/L	2	06/04/18	PS	SW8270D	
Di-n-octylphthalate	ND	9.6	ug/L	2	06/04/18	PS	SW8270D	
Isophorone	ND	9.6	ug/L	2	06/04/18	PS	SW8270D	
Naphthalene	180	48	ug/L	10	06/05/18	PS	SW8270D	B
N-Nitrosodimethylamine	ND	9.6	ug/L	2	06/04/18	PS	SW8270D	
N-Nitrosodi-n-propylamine	ND	9.6	ug/L	2	06/04/18	PS	SW8270D	
N-Nitrosodiphenylamine	ND	9.6	ug/L	2	06/04/18	PS	SW8270D	
Phenol	5.0	1.9	ug/L	2	06/04/18	PS	SW8270D	
QA/QC Surrogates								
% 2,4,6-Tribromophenol	69		%	2	06/04/18	PS	15 - 110 %	
% 2-Fluorobiphenyl	61		%	2	06/04/18	PS	30 - 130 %	
% 2-Fluorophenol	33		%	2	06/04/18	PS	15 - 110 %	
% Nitrobenzene-d5	48		%	2	06/04/18	PS	30 - 130 %	
% Phenol-d5	37		%	2	06/04/18	PS	15 - 110 %	
% Terphenyl-d14	67		%	2	06/04/18	PS	30 - 130 %	
Semivolatiles (SIM)								
1,2,4,5-Tetrachlorobenzene	ND	0.48	ug/L	1	06/04/18	DD	SW8270D (SIM)	
2-Methylnaphthalene	7.0	0.96	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Acenaphthylene	4.2	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Anthracene	0.70	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Benz(a)anthracene	0.06	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Benzo(a)pyrene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Benzo(b)fluoranthene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Benzo(ghi)perylene	ND	0.19	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Benzo(k)fluoranthene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Bis(2-ethylhexyl)phthalate	ND	0.48	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Chrysene	0.06	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Dibenz(a,h)anthracene	ND	0.01	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Dibenzofuran	0.48	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Fluoranthene	1.1	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-18D

Phoenix I.D.: CA61340

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Fluorene	3.0	0.10	ug/L	1	06/04/18	DD	SW8270D (SIM)
Hexachlorobenzene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Hexachlorobutadiene	ND	0.48	ug/L	1	06/04/18	DD	SW8270D (SIM)
Hexachlorocyclopentadiene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Hexachloroethane	ND	0.48	ug/L	1	06/04/18	DD	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Nitrobenzene	ND	0.10	ug/L	1	06/04/18	DD	SW8270D (SIM)
Pentachloronitrobenzene	ND	0.10	ug/L	1	06/04/18	DD	SW8270D (SIM)
Pentachlorophenol	ND	0.77	ug/L	1	06/04/18	DD	SW8270D (SIM)
Phenanthrene	3.0	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Pyrene	1.5	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Pyridine	ND	0.48	ug/L	1	06/04/18	DD	SW8270D (SIM)
QA/QC Surrogates							
% 2,4,6-Tribromophenol	75		%	1	06/04/18	DD	15 - 110 %
% 2-Fluorobiphenyl	57		%	1	06/04/18	DD	30 - 130 %
% 2-Fluorophenol	39		%	1	06/04/18	DD	15 - 110 %
% Nitrobenzene-d5	58		%	1	06/04/18	DD	30 - 130 %
% Phenol-d5	46		%	1	06/04/18	DD	15 - 110 %
% Terphenyl-d14	87		%	1	06/04/18	DD	30 - 130 %

B = Present in blank, no bias suspected.

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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Semi-Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C24. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
June 11, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

June 11, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/30/18	9:25
Location Code:	TIGHE-DAS	Received by:	DL	05/30/18	17:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14075544B				

Laboratory Data

SDG ID: GCA61339
Phoenix ID: CA61341

Project ID: ROCKVILLE MGP
Client ID: MW-23S

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Arsenic	< 0.004	0.004	mg/L	1	06/01/18	EK	SW6010C
Barium	0.172	0.002	mg/L	1	06/01/18	EK	SW6010C
Beryllium	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Cadmium	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Chromium	0.020	0.001	mg/L	1	06/01/18	EK	SW6010C
Copper	0.006	0.005	mg/L	1	06/01/18	EK	SW6010C
Mercury	< 0.0002	0.0002	mg/L	1	06/01/18	RS	SW7470A
Nickel	0.006	0.001	mg/L	1	06/01/18	EK	SW6010C
Lead	< 0.002	0.002	mg/L	1	06/01/18	EK	SW6010C
Antimony	< 0.05	0.05	mg/L	1	06/01/18	MA	SW6010C
Selenium	< 0.02	0.02	mg/L	1	06/01/18	EK	SW6010C
Thallium	< 0.0005	0.0005	mg/L	5	06/01/18	CPP	SW6020B
Vanadium	0.011	0.002	mg/L	1	06/01/18	EK	SW6010C
Zinc	0.037	0.002	mg/L	1	06/01/18	EK	SW6010C
Total Cyanide	< 0.010	0.010	mg/L	1	06/05/18	O/GD	SW9010C/SW9012B
Extraction of CT ETPH	Completed				06/04/18	P/D	SW3510C/SW3520C
Mercury Digestion	Completed				05/31/18	I/I	SW7470A
Semi-Volatile Extraction	Completed				05/31/18	P/R	SW3520C
Total Metals Digestion	Completed				05/31/18	AG	
Total Metals Digestion MS	Completed				05/31/18	AG	
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	0.067	mg/L	1	06/05/18	JRB	CTETPH 8015D
Identification	ND		mg/L	1	06/05/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	67		%	1	06/05/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-23S

Phoenix I.D.: CA61341

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	06/05/18	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	06/05/18	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	06/05/18	MH	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	06/05/18	MH	SW8260C
Acetone	ND	25	ug/L	1	06/05/18	MH	SW8260C
Acrylonitrile	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Benzene	ND	0.70	ug/L	1	06/05/18	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	06/05/18	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	06/05/18	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	06/05/18	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	06/05/18	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	06/05/18	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-23S

Phoenix I.D.: CA61341

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	06/05/18	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Styrene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	06/05/18	MH	SW8260C
Toluene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Total Xylenes	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	06/05/18	MH	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	06/05/18	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	06/05/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	06/05/18	MH	70 - 130 %
% Bromofluorobenzene	107		%	1	06/05/18	MH	70 - 130 %
% Dibromofluoromethane	112		%	1	06/05/18	MH	70 - 130 %
% Toluene-d8	113		%	1	06/05/18	MH	70 - 130 %
Semivolatiles							
1,2,4-Trichlorobenzene	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
1,2-Dichlorobenzene	ND	2.4	ug/L	1	06/04/18	KCA	SW8270D
1,2-Diphenylhydrazine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
1,3-Dichlorobenzene	ND	2.4	ug/L	1	06/04/18	KCA	SW8270D
1,4-Dichlorobenzene	ND	2.4	ug/L	1	06/04/18	KCA	SW8270D
2,4,5-Trichlorophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2,4,6-Trichlorophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2,4-Dichlorophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2,4-Dimethylphenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2,4-Dinitrophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2,4-Dinitrotoluene	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
2,6-Dinitrotoluene	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
2-Chloronaphthalene	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
2-Chlorophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2-Nitroaniline	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
2-Nitrophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	9.4	ug/L	1	06/04/18	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
3-Nitroaniline	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-23S

Phoenix I.D.: CA61341

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4,6-Dinitro-2-methylphenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
4-Chloro-3-methylphenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
4-Chloroaniline	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
4-Nitroaniline	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
4-Nitrophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
Acetophenone	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Aniline	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Benzidine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Benzoic acid	ND	47	ug/L	1	06/04/18	KCA	SW8270D
Benzyl butyl phthalate	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Carbazole	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Diethyl phthalate	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Dimethylphthalate	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Di-n-butylphthalate	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Di-n-octylphthalate	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Isophorone	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
N-Nitrosodimethylamine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
N-Nitrosodiphenylamine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Phenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	69		%	1	06/04/18	KCA	15 - 110 %
% 2-Fluorobiphenyl	65		%	1	06/04/18	KCA	30 - 130 %
% 2-Fluorophenol	42		%	1	06/04/18	KCA	15 - 110 %
% Nitrobenzene-d5	60		%	1	06/04/18	KCA	30 - 130 %
% Phenol-d5	47		%	1	06/04/18	KCA	15 - 110 %
% Terphenyl-d14	67		%	1	06/04/18	KCA	30 - 130 %
Semivolatiles (SIM)							
1,2,4,5-Tetrachlorobenzene	ND	0.47	ug/L	1	06/04/18	DD	SW8270D (SIM)
2-Methylnaphthalene	ND	0.94	ug/L	1	06/04/18	DD	SW8270D (SIM)
Acenaphthene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Acenaphthylene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Anthracene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Benz(a)anthracene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Benzo(a)pyrene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.19	ug/L	1	06/04/18	DD	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Bis(2-ethylhexyl)phthalate	ND	0.47	ug/L	1	06/04/18	DD	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.01	ug/L	1	06/04/18	DD	SW8270D (SIM)
Dibenzofuran	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Fluoranthene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	06/04/18	DD	SW8270D (SIM)

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-23S

Phoenix I.D.: CA61341

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Hexachlorobenzene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Hexachlorobutadiene	ND	0.47	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Hexachlorocyclopentadiene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Hexachloroethane	ND	0.47	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Naphthalene	ND	0.09	ug/L	1	06/04/18	DD	SW8270D (SIM)	B
Nitrobenzene	ND	0.09	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Pentachloronitrobenzene	ND	0.09	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Pentachlorophenol	ND	0.75	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Phenanthrene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Pyrene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Pyridine	ND	0.47	ug/L	1	06/04/18	DD	SW8270D (SIM)	
QA/QC Surrogates								
% 2,4,6-Tribromophenol	70		%	1	06/04/18	DD	15 - 110 %	
% 2-Fluorobiphenyl	58		%	1	06/04/18	DD	30 - 130 %	
% 2-Fluorophenol	44		%	1	06/04/18	DD	15 - 110 %	
% Nitrobenzene-d5	69		%	1	06/04/18	DD	30 - 130 %	
% Phenol-d5	58		%	1	06/04/18	DD	15 - 110 %	
% Terphenyl-d14	78		%	1	06/04/18	DD	30 - 130 %	

B = Present in blank, no bias suspected.

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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
June 11, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

June 11, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/30/18	12:57
Location Code:	TIGHE-DAS	Received by:	DL	05/30/18	17:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14075544B				

Laboratory Data

SDG ID: GCA61339
Phoenix ID: CA61342

Project ID: ROCKVILLE MGP
Client ID: MW-10BR

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Arsenic	< 0.004	0.004	mg/L	1	06/01/18	EK	SW6010C
Barium	0.088	0.002	mg/L	1	06/01/18	EK	SW6010C
Beryllium	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Cadmium	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Chromium	0.066	0.001	mg/L	1	06/01/18	EK	SW6010C
Copper	< 0.005	0.005	mg/L	1	06/01/18	EK	SW6010C
Mercury	< 0.0002	0.0002	mg/L	1	05/31/18	RS	SW7470A
Nickel	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Lead	< 0.002	0.002	mg/L	1	06/01/18	EK	SW6010C
Antimony	< 0.05	0.05	mg/L	1	06/01/18	EK	SW6010C
Selenium	< 0.02	0.02	mg/L	1	06/01/18	EK	SW6010C
Thallium	< 0.0005	0.0005	mg/L	5	06/01/18	CPP	SW6020B
Vanadium	0.005	0.002	mg/L	1	06/01/18	EK	SW6010C
Zinc	0.003	0.002	mg/L	1	06/01/18	EK	SW6010C
Total Cyanide	< 0.010	0.010	mg/L	1	06/05/18	O/GD	SW9010C/SW9012B
Extraction of CT ETPH	Completed				06/04/18	P/D	SW3510C/SW3520C
Mercury Digestion	Completed				05/31/18	I/I	SW7470A
Semi-Volatile Extraction	Completed				05/31/18	P/R	SW3520C
Total Metals Digestion	Completed				05/31/18	AG	
Total Metals Digestion MS	Completed				05/31/18	AG	
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	0.34	0.066	mg/L	1	06/05/18	JRB	CTETPH 8015D
Identification	**		mg/L	1	06/05/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	63		%	1	06/05/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-10BR

Phoenix I.D.: CA61342

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	06/04/18	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	06/04/18	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
Acetone	ND	25	ug/L	1	06/04/18	MH	SW8260C
Acrylonitrile	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Benzene	ND	0.70	ug/L	1	06/04/18	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	06/04/18	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Chloroform	12	1.0	ug/L	1	06/04/18	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	06/04/18	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	06/04/18	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	06/04/18	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-10BR

Phoenix I.D.: CA61342

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Naphthalene	1.6	1.0	ug/L	1	06/04/18	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Styrene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	06/04/18	MH	SW8260C
Toluene	1.2	1.0	ug/L	1	06/04/18	MH	SW8260C
Total Xylenes	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	06/04/18	MH	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	06/04/18	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	06/04/18	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	06/04/18	MH	70 - 130 %
% Toluene-d8	94		%	1	06/04/18	MH	70 - 130 %
Semivolatiles							
1,2,4-Trichlorobenzene	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
1,2-Dichlorobenzene	ND	2.4	ug/L	1	06/04/18	KCA	SW8270D
1,2-Diphenylhydrazine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
1,3-Dichlorobenzene	ND	2.4	ug/L	1	06/04/18	KCA	SW8270D
1,4-Dichlorobenzene	ND	2.4	ug/L	1	06/04/18	KCA	SW8270D
2,4,5-Trichlorophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2,4,6-Trichlorophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2,4-Dichlorophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2,4-Dimethylphenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2,4-Dinitrophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2,4-Dinitrotoluene	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
2,6-Dinitrotoluene	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
2-Chloronaphthalene	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
2-Chlorophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
2-Nitroaniline	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
2-Nitrophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	9.4	ug/L	1	06/04/18	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
3-Nitroaniline	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-10BR

Phoenix I.D.: CA61342

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4,6-Dinitro-2-methylphenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
4-Chloro-3-methylphenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
4-Chloroaniline	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
4-Nitroaniline	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
4-Nitrophenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
Acetophenone	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Aniline	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Benzidine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Benzoic acid	ND	47	ug/L	1	06/04/18	KCA	SW8270D
Benzyl butyl phthalate	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Carbazole	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Diethyl phthalate	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Dimethylphthalate	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Di-n-butylphthalate	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Di-n-octylphthalate	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Isophorone	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
N-Nitrosodimethylamine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
N-Nitrosodiphenylamine	ND	4.7	ug/L	1	06/04/18	KCA	SW8270D
Phenol	ND	0.94	ug/L	1	06/04/18	KCA	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	79		%	1	06/04/18	KCA	15 - 110 %
% 2-Fluorobiphenyl	64		%	1	06/04/18	KCA	30 - 130 %
% 2-Fluorophenol	36		%	1	06/04/18	KCA	15 - 110 %
% Nitrobenzene-d5	53		%	1	06/04/18	KCA	30 - 130 %
% Phenol-d5	28		%	1	06/04/18	KCA	15 - 110 %
% Terphenyl-d14	70		%	1	06/04/18	KCA	30 - 130 %
Semivolatiles (SIM)							
1,2,4,5-Tetrachlorobenzene	ND	0.47	ug/L	1	06/04/18	DD	SW8270D (SIM)
2-Methylnaphthalene	ND	0.94	ug/L	1	06/04/18	DD	SW8270D (SIM)
Acenaphthene	0.15	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Acenaphthylene	0.41	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Anthracene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Benz(a)anthracene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Benzo(a)pyrene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.19	ug/L	1	06/04/18	DD	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Bis(2-ethylhexyl)phthalate	ND	0.47	ug/L	1	06/04/18	DD	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.01	ug/L	1	06/04/18	DD	SW8270D (SIM)
Dibenzofuran	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Fluoranthene	0.10	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)
Fluorene	0.16	0.09	ug/L	1	06/04/18	DD	SW8270D (SIM)

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-10BR

Phoenix I.D.: CA61342

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Hexachlorobenzene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Hexachlorobutadiene	ND	0.47	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Hexachlorocyclopentadiene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Hexachloroethane	ND	0.47	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Naphthalene	1.3	0.09	ug/L	1	06/04/18	DD	SW8270D (SIM)	B
Nitrobenzene	ND	0.09	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Pentachloronitrobenzene	ND	0.09	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Pentachlorophenol	ND	0.75	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Phenanthrene	0.33	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Pyrene	0.15	0.05	ug/L	1	06/04/18	DD	SW8270D (SIM)	
Pyridine	ND	0.47	ug/L	1	06/04/18	DD	SW8270D (SIM)	
QA/QC Surrogates								
% 2,4,6-Tribromophenol	72		%	1	06/04/18	DD	15 - 110 %	
% 2-Fluorobiphenyl	58		%	1	06/04/18	DD	30 - 130 %	
% 2-Fluorophenol	41		%	1	06/04/18	DD	15 - 110 %	
% Nitrobenzene-d5	72		%	1	06/04/18	DD	30 - 130 %	
% Phenol-d5	62		%	1	06/04/18	DD	15 - 110 %	
% Terphenyl-d14	91		%	1	06/04/18	DD	30 - 130 %	

B = Present in blank, no bias suspected.

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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C24. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
June 11, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

June 11, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/30/18	16:30
Location Code:	TIGHE-DAS	Received by:	DL	05/30/18	17:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14075544B				

Laboratory Data

SDG ID: GCA61339
Phoenix ID: CA61343

Project ID: ROCKVILLE MGP
Client ID: EQ BLANK

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Arsenic	< 0.004	0.004	mg/L	1	06/01/18	EK	SW6010C
Barium	< 0.002	0.002	mg/L	1	06/01/18	EK	SW6010C
Beryllium	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Cadmium	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Chromium	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Copper	< 0.005	0.005	mg/L	1	06/01/18	EK	SW6010C
Mercury	< 0.0002	0.0002	mg/L	1	05/31/18	RS	SW7470A
Nickel	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Lead	< 0.002	0.002	mg/L	1	06/01/18	EK	SW6010C
Antimony	< 0.05	0.05	mg/L	1	06/01/18	EK	SW6010C
Selenium	< 0.02	0.02	mg/L	1	06/01/18	EK	SW6010C
Thallium	< 0.0005	0.0005	mg/L	5	06/01/18	CPP	SW6020B
Vanadium	< 0.002	0.002	mg/L	1	06/01/18	EK	SW6010C
Zinc	0.007	0.002	mg/L	1	06/01/18	EK	SW6010C
Total Cyanide	< 0.010	0.010	mg/L	1	06/05/18	O/GD	SW9010C/SW9012B
Extraction of CT ETPH	Completed				06/04/18	P/D	SW3510C/SW3520C
Mercury Digestion	Completed				05/31/18	I/I	SW7470A
Semi-Volatile Extraction	Completed				06/04/18	P/D/D	SW3520C
Total Metals Digestion	Completed				05/31/18	AG	
Total Metals Digestion MS	Completed				05/31/18	AG	
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	0.066	mg/L	1	06/05/18	JRB	CTETPH 8015D
Identification	ND		mg/L	1	06/05/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	68		%	1	06/05/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: EQ BLANK

Phoenix I.D.: CA61343

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	06/04/18	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	06/04/18	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
Acetone	ND	25	ug/L	1	06/04/18	MH	SW8260C
Acrylonitrile	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Benzene	ND	0.70	ug/L	1	06/04/18	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	06/04/18	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	06/04/18	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	06/04/18	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	06/04/18	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C

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Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Styrene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	06/04/18	MH	SW8260C
Toluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Total Xylenes	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	06/04/18	MH	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	96		%	1	06/04/18	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	06/04/18	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	06/04/18	MH	70 - 130 %
% Toluene-d8	94		%	1	06/04/18	MH	70 - 130 %
Semivolatiles							
1,2,4-Trichlorobenzene	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
1,2-Dichlorobenzene	ND	2.4	ug/L	1	06/07/18	DD	SW8270D
1,2-Diphenylhydrazine	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
1,3-Dichlorobenzene	ND	2.4	ug/L	1	06/07/18	DD	SW8270D
1,4-Dichlorobenzene	ND	2.4	ug/L	1	06/07/18	DD	SW8270D
2,4,5-Trichlorophenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
2,4,6-Trichlorophenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
2,4-Dichlorophenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
2,4-Dimethylphenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
2,4-Dinitrophenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
2,4-Dinitrotoluene	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
2,6-Dinitrotoluene	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
2-Chloronaphthalene	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
2-Chlorophenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
2-Methylphenol (o-cresol)	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
2-Nitroaniline	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
2-Nitrophenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	9.4	ug/L	1	06/07/18	DD	SW8270D
3,3'-Dichlorobenzidine	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
3-Nitroaniline	ND	4.7	ug/L	1	06/07/18	DD	SW8270D

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Phoenix I.D.: CA61343

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4,6-Dinitro-2-methylphenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
4-Bromophenyl phenyl ether	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
4-Chloro-3-methylphenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
4-Chloroaniline	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
4-Chlorophenyl phenyl ether	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
4-Nitroaniline	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
4-Nitrophenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
Acetophenone	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Aniline	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Benzidine	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Benzoic acid	ND	47	ug/L	1	06/07/18	DD	SW8270D
Benzyl butyl phthalate	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Bis(2-chloroethoxy)methane	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Bis(2-chloroethyl)ether	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
Bis(2-chloroisopropyl)ether	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Carbazole	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Diethyl phthalate	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Dimethylphthalate	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Di-n-butylphthalate	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Di-n-octylphthalate	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Isophorone	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
N-Nitrosodimethylamine	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
N-Nitrosodi-n-propylamine	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
N-Nitrosodiphenylamine	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Phenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	87		%	1	06/07/18	DD	15 - 110 %
% 2-Fluorobiphenyl	72		%	1	06/07/18	DD	30 - 130 %
% 2-Fluorophenol	48		%	1	06/07/18	DD	15 - 110 %
% Nitrobenzene-d5	73		%	1	06/07/18	DD	30 - 130 %
% Phenol-d5	62		%	1	06/07/18	DD	15 - 110 %
% Terphenyl-d14	82		%	1	06/07/18	DD	30 - 130 %
Semivolatiles (SIM)							
1,2,4,5-Tetrachlorobenzene	ND	0.47	ug/L	1	06/06/18	DD	SW8270D (SIM)
2-Methylnaphthalene	ND	0.94	ug/L	1	06/06/18	DD	SW8270D (SIM)
Acenaphthene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Acenaphthylene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Anthracene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Benz(a)anthracene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Benzo(a)pyrene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.19	ug/L	1	06/06/18	DD	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Bis(2-ethylhexyl)phthalate	2.6	0.47	ug/L	1	06/06/18	DD	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.01	ug/L	1	06/06/18	DD	SW8270D (SIM)
Dibenzofuran	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Fluoranthene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	06/06/18	DD	SW8270D (SIM)

Ver 1

Project ID: ROCKVILLE MGP
Client ID: EQ BLANK

Phoenix I.D.: CA61343

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Hexachlorobenzene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Hexachlorobutadiene	ND	0.47	ug/L	1	06/06/18	DD	SW8270D (SIM)
Hexachlorocyclopentadiene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Hexachloroethane	ND	0.47	ug/L	1	06/06/18	DD	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Naphthalene	ND	0.09	ug/L	1	06/06/18	DD	SW8270D (SIM)
Nitrobenzene	ND	0.09	ug/L	1	06/06/18	DD	SW8270D (SIM)
Pentachloronitrobenzene	ND	0.09	ug/L	1	06/06/18	DD	SW8270D (SIM)
Pentachlorophenol	ND	0.75	ug/L	1	06/06/18	DD	SW8270D (SIM)
Phenanthrene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Pyrene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Pyridine	ND	0.47	ug/L	1	06/06/18	DD	SW8270D (SIM)
QA/QC Surrogates							
% 2,4,6-Tribromophenol	74		%	1	06/06/18	DD	15 - 110 %
% 2-Fluorobiphenyl	62		%	1	06/06/18	DD	30 - 130 %
% 2-Fluorophenol	54		%	1	06/06/18	DD	15 - 110 %
% Nitrobenzene-d5	91		%	1	06/06/18	DD	30 - 130 %
% Phenol-d5	72		%	1	06/06/18	DD	15 - 110 %
% Terphenyl-d14	73		%	1	06/06/18	DD	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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
June 11, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

June 11, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/30/18	
Location Code:	TIGHE-DAS	Received by:	DL	05/30/18	17:38
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	14075544B				

Laboratory Data

SDG ID: GCA61339
Phoenix ID: CA61344

Project ID: ROCKVILLE MGP
Client ID: TRIP BLANK

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	06/04/18	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	06/04/18	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	06/04/18	MH	SW8260C

Project ID: ROCKVILLE MGP
Client ID: TRIP BLANK

Phoenix I.D.: CA61344

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	06/04/18	MH	SW8260C
Acrylonitrile	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Benzene	ND	0.70	ug/L	1	06/04/18	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	06/04/18	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	06/04/18	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	06/04/18	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	06/04/18	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Styrene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	06/04/18	MH	SW8260C
Toluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Total Xylenes	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	06/04/18	MH	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	92		%	1	06/04/18	MH	70 - 130 %
% Bromofluorobenzene	91		%	1	06/04/18	MH	70 - 130 %
% Dibromofluoromethane	90		%	1	06/04/18	MH	70 - 130 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: TRIP BLANK

Phoenix I.D.: CA61344

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	91		%	1	06/04/18	MH	70 - 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:

TRIP BLANK INCLUDED.

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
June 11, 2018
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
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QA/QC Report

June 11, 2018

QA/QC Data

SDG I.D.: GCA61339

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 432640 (mg/L), QC Sample No: CA60561 (CA61339, CA61340, CA61341)													
Mercury - Water	BRL	0.0002	<0.0002	0.0002	NC	94.4			87.9			80 - 120	20
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 432731 (mg/L), QC Sample No: CA60713 (CA61339)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	0.008	0.006	NC	95.6			102			75 - 125	20
Barium	BRL	0.002	0.286	0.286	0	104			103			75 - 125	20
Beryllium	BRL	0.001	<0.001	<0.001	NC	99.7			102			75 - 125	20
Cadmium	BRL	0.001	<0.001	<0.001	NC	96.3			98.7			75 - 125	20
Chromium	BRL	0.001	<0.001	0.001	NC	96.0			99.8			75 - 125	20
Copper	BRL	0.005	<0.005	<0.005	NC	101			103			75 - 125	20
Lead	BRL	0.002	0.004	0.005	NC	96.4			99.8			75 - 125	20
Nickel	BRL	0.001	<0.001	<0.001	NC	99.2			101			75 - 125	20
Selenium	BRL	0.010	0.020	0.016	NC	94.0			98.0			75 - 125	20
Silver	BRL	0.001	0.002	0.002	NC	97.0			102			75 - 125	20
Vanadium	BRL	0.002	<0.002	<0.002	NC	98.7			102			75 - 125	20
Zinc	BRL	0.002	0.003	0.004	NC	95.9			99.9			75 - 125	20
QA/QC Batch 432639 (mg/L), QC Sample No: CA60946 (CA61342, CA61343)													
Mercury - Water	BRL	0.0002	<0.0002	<0.0002	NC	98.1			90.5			80 - 120	20
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 432747 (mg/L), QC Sample No: CA61339 5X (CA61339, CA61340, CA61341, CA61342, CA61343)													
ICP MS Metals - Aqueous													
Antimony	BRL	0.0020	<0.0030	<0.0020	NC	104			105			75 - 125	20
Thallium	BRL	0.0015	<0.0005	<0.0015	NC	98.2			100			75 - 125	20
QA/QC Batch 432732 (mg/L), QC Sample No: CA61539 (CA61340, CA61341, CA61342, CA61343)													
ICP Metals - Aqueous													
Antimony	BRL	0.005	<0.005	<0.005	NC	113			111			75 - 125	20
Arsenic	BRL	0.004	<0.004	<0.004	NC	103			102			75 - 125	20
Barium	BRL	0.002	0.033	0.032	3.10	106			104			75 - 125	20
Beryllium	BRL	0.001	<0.001	<0.001	NC	105			103			75 - 125	20
Cadmium	BRL	0.001	<0.001	<0.001	NC	110			103			75 - 125	20
Chromium	BRL	0.001	<0.001	<0.001	NC	106			101			75 - 125	20
Copper	BRL	0.005	<0.005	<0.005	NC	103			102			75 - 125	20
Lead	BRL	0.002	<0.002	<0.002	NC	107			102			75 - 125	20
Nickel	BRL	0.001	<0.001	<0.001	NC	110			104			75 - 125	20
Selenium	BRL	0.010	<0.010	<0.010	NC	103			99.4			75 - 125	20
Silver	BRL	0.001	<0.001	<0.001	NC	102			99.6			75 - 125	20
Vanadium	BRL	0.002	<0.002	<0.002	NC	104			101			75 - 125	20
Zinc	BRL	0.002	<0.002	<0.002	NC	107			103			75 - 125	20

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QA/QC Report

June 11, 2018

QA/QC Data

SDG I.D.: GCA61339

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 433119 (mg/L), QC Sample No: CA61339 (CA61339, CA61340, CA61341, CA61342, CA61343)													
Total Cyanide	BRL	0.010	<0.010	<0.010	NC	92.5			103			90 - 110	20
Comment:													
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils													

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QA/QC Report

June 11, 2018

QA/QC Data

SDG I.D.: GCA61339

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 433110 (mg/L), QC Sample No: CA61339 (CA61339, CA61340, CA61341, CA61342, CA61343)										
TPH by GC (Extractable Products) - Ground Water										
Ext. Petroleum H.C. (C9-C36)	ND	0.10	80	78	2.5				60 - 120	30
% n-Pentacosane	68	%	74	68	8.5				50 - 150	20
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 433254 (ug/L), QC Sample No: CA61344 (CA61342, CA61343, CA61344)										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	101	97	4.0				70 - 130	30
1,1,1-Trichloroethane	ND	1.0	98	95	3.1				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	101	92	9.3				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	101	86	16.0				70 - 130	30
1,1-Dichloroethane	ND	1.0	96	92	4.3				70 - 130	30
1,1-Dichloroethene	ND	1.0	106	106	0.0				70 - 130	30
1,1-Dichloropropene	ND	1.0	100	99	1.0				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	98	94	4.2				70 - 130	30
1,2,3-Trichloropropane	ND	1.0	97	89	8.6				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	101	96	5.1				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	99	100	1.0				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	99	85	15.2				70 - 130	30
1,2-Dibromoethane	ND	1.0	102	95	7.1				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	101	97	4.0				70 - 130	30
1,2-Dichloroethane	ND	1.0	96	85	12.2				70 - 130	30
1,2-Dichloropropane	ND	1.0	100	93	7.3				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	98	100	2.0				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	100	98	2.0				70 - 130	30
1,3-Dichloropropane	ND	1.0	99	90	9.5				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	99	97	2.0				70 - 130	30
2,2-Dichloropropane	ND	1.0	99	91	8.4				70 - 130	30
2-Chlorotoluene	ND	1.0	100	101	1.0				70 - 130	30
2-Hexanone	ND	5.0	80	70	13.3				70 - 130	30
2-Isopropyltoluene	ND	1.0	98	99	1.0				70 - 130	30
4-Chlorotoluene	ND	1.0	98	99	1.0				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	87	70	21.7				70 - 130	30
Acetone	ND	5.0	55	55	0.0				70 - 130	30
Acrylonitrile	ND	5.0	90	77	15.6				70 - 130	30
Benzene	ND	0.70	99	95	4.1				70 - 130	30
Bromobenzene	ND	1.0	101	100	1.0				70 - 130	30
Bromochloromethane	ND	1.0	100	87	13.9				70 - 130	30
Bromodichloromethane	ND	0.50	102	92	10.3				70 - 130	30
Bromoform	ND	1.0	106	92	14.1				70 - 130	30
Bromomethane	ND	1.0	106	106	0.0				70 - 130	30

QA/QC Data

SDG I.D.: GCA61339

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Carbon Disulfide	ND	1.0	99	100	1.0				70 - 130	30	
Carbon tetrachloride	ND	1.0	103	100	3.0				70 - 130	30	
Chlorobenzene	ND	1.0	99	97	2.0				70 - 130	30	
Chloroethane	ND	1.0	98	97	1.0				70 - 130	30	
Chloroform	ND	1.0	94	87	7.7				70 - 130	30	
Chloromethane	ND	1.0	102	100	2.0				70 - 130	30	
cis-1,2-Dichloroethene	ND	1.0	99	94	5.2				70 - 130	30	
cis-1,3-Dichloropropene	ND	0.40	101	89	12.6				70 - 130	30	
Dibromochloromethane	ND	0.50	108	100	7.7				70 - 130	30	
Dibromomethane	ND	1.0	101	87	14.9				70 - 130	30	
Dichlorodifluoromethane	ND	1.0	130	136	4.5				70 - 130	30	I
Ethylbenzene	ND	1.0	102	101	1.0				70 - 130	30	
Hexachlorobutadiene	ND	0.40	108	113	4.5				70 - 130	30	
Isopropylbenzene	ND	1.0	99	103	4.0				70 - 130	30	
m&p-Xylene	ND	1.0	100	97	3.0				70 - 130	30	
Methyl ethyl ketone	ND	5.0	71	59	18.5				70 - 130	30	I
Methyl t-butyl ether (MTBE)	ND	1.0	98	76	25.3				70 - 130	30	
Methylene chloride	ND	1.0	91	105	14.3				70 - 130	30	
Naphthalene	ND	1.0	99	94	5.2				70 - 130	30	
n-Butylbenzene	ND	1.0	100	97	3.0				70 - 130	30	
n-Propylbenzene	ND	1.0	100	100	0.0				70 - 130	30	
o-Xylene	ND	1.0	102	98	4.0				70 - 130	30	
p-Isopropyltoluene	ND	1.0	99	99	0.0				70 - 130	30	
sec-Butylbenzene	ND	1.0	102	100	2.0				70 - 130	30	
Styrene	ND	1.0	101	97	4.0				70 - 130	30	
tert-Butylbenzene	ND	1.0	98	99	1.0				70 - 130	30	
Tetrachloroethene	ND	1.0	104	98	5.9				70 - 130	30	
Tetrahydrofuran (THF)	ND	2.5	84	69	19.6				70 - 130	30	I
Toluene	ND	1.0	104	97	7.0				70 - 130	30	
trans-1,2-Dichloroethene	ND	1.0	102	100	2.0				70 - 130	30	
trans-1,3-Dichloropropene	ND	0.40	97	82	16.8				70 - 130	30	
trans-1,4-dichloro-2-butene	ND	5.0	102	93	9.2				70 - 130	30	
Trichloroethene	ND	1.0	99	98	1.0				70 - 130	30	
Trichlorofluoromethane	ND	1.0	103	104	1.0				70 - 130	30	
Trichlorotrifluoroethane	ND	1.0	114	115	0.9				70 - 130	30	
Vinyl chloride	ND	1.0	110	112	1.8				70 - 130	30	
% 1,2-dichlorobenzene-d4	98	%	100	97	3.0				70 - 130	30	
% Bromofluorobenzene	96	%	98	94	4.2				70 - 130	30	
% Dibromofluoromethane	99	%	101	91	10.4				70 - 130	30	
% Toluene-d8	93	%	101	99	2.0				70 - 130	30	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 432741 (ug/L), QC Sample No: CA61703 (CA61339, CA61340, CA61341, CA61342)

Semivolatiles (SIM) - Ground Water

1,2,4,5-Tetrachlorobenzene	ND	0.50	58	59	1.7				30 - 130	20	
2-Methylnaphthalene	ND	0.02	56	62	10.2				30 - 130	20	
Acenaphthene	ND	0.02	63	68	7.6				30 - 130	20	
Acenaphthylene	ND	0.02	54	59	8.8				30 - 130	20	
Anthracene	ND	0.02	76	72	5.4				30 - 130	20	
Benz(a)anthracene	ND	0.02	73	74	1.4				30 - 130	20	
Benzo(a)pyrene	ND	0.02	66	65	1.5				30 - 130	20	

QA/QC Data

SDG I.D.: GCA61339

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzo(b)fluoranthene	ND	0.02	83	77	7.5				30 - 130	20	
Benzo(ghi)perylene	ND	0.02	60	57	5.1				30 - 130	20	
Benzo(k)fluoranthene	ND	0.02	82	80	2.5				30 - 130	20	
Bis(2-ethylhexyl)phthalate	ND	0.10	79	81	2.5				30 - 130	20	
Chrysene	ND	0.02	77	75	2.6				30 - 130	20	
Dibenz(a,h)anthracene	ND	0.01	65	59	9.7				30 - 130	20	
Dibenzofuran	ND	0.05	63	68	7.6				30 - 130	20	
Fluoranthene	ND	0.02	77	71	8.1				30 - 130	20	
Fluorene	ND	0.02	66	68	3.0				30 - 130	20	
Hexachlorobenzene	ND	0.02	82	78	5.0				30 - 130	20	
Hexachlorobutadiene	ND	0.05	48	53	9.9				30 - 130	20	
Hexachlorocyclopentadiene	ND	0.05	33	34	3.0				30 - 130	20	
Hexachloroethane	ND	0.05	42	40	4.9				30 - 130	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	62	58	6.7				30 - 130	20	
Naphthalene	0.04	0.02	51	55	7.5				30 - 130	20	
Nitrobenzene	ND	0.05	54	58	7.1				30 - 130	20	
Pentachloronitrobenzene	ND	0.10	91	86	5.6				30 - 130	20	
Pentachlorophenol	ND	0.20	112	101	10.3				30 - 130	20	
Phenanthrene	ND	0.02	74	66	11.4				30 - 130	20	
Pyrene	ND	0.02	80	74	7.8				30 - 130	20	
Pyridine	ND	0.50	38	43	12.3				30 - 130	20	
% 2,4,6-Tribromophenol	82	%	100	92	8.3				15 - 110	20	
% 2-Fluorobiphenyl	60	%	58	59	1.7				30 - 130	20	
% 2-Fluorophenol	52	%	35	41	15.8				15 - 110	20	
% Nitrobenzene-d5	61	%	51	53	3.8				30 - 130	20	
% Phenol-d5	56	%	43	46	6.7				15 - 110	20	
% Terphenyl-d14	71	%	80	72	10.5				30 - 130	20	

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%)

QA/QC Batch 432741 (ug/L), QC Sample No: CA61703 (CA61339, CA61340, CA61341, CA61342)

Semivolatiles - Ground Water

1,2,4-Trichlorobenzene	ND	3.5	53	60	12.4				30 - 130	20	
1,2-Dichlorobenzene	ND	1.0	42	52	21.3				30 - 130	20	r
1,2-Diphenylhydrazine	ND	1.6	84	86	2.4				30 - 130	20	
1,3-Dichlorobenzene	ND	1.0	39	48	20.7				30 - 130	20	r
1,4-Dichlorobenzene	ND	1.0	41	50	19.8				30 - 130	20	
2,4,5-Trichlorophenol	ND	1.0	76	78	2.6				30 - 130	20	
2,4,6-Trichlorophenol	ND	1.0	68	71	4.3				30 - 130	20	
2,4-Dichlorophenol	ND	1.0	63	68	7.6				30 - 130	20	
2,4-Dimethylphenol	ND	1.0	72	79	9.3				30 - 130	20	
2,4-Dinitrophenol	ND	1.0	88	85	3.5				30 - 130	20	
2,4-Dinitrotoluene	ND	3.5	83	81	2.4				30 - 130	20	
2,6-Dinitrotoluene	ND	3.5	79	79	0.0				30 - 130	20	
2-Chloronaphthalene	ND	3.5	66	72	8.7				30 - 130	20	
2-Chlorophenol	ND	1.0	40	47	16.1				30 - 130	20	
2-Methylphenol (o-cresol)	ND	1.0	52	59	12.6				30 - 130	20	
2-Nitroaniline	ND	3.5	121	116	4.2				30 - 130	20	
2-Nitrophenol	ND	1.0	69	78	12.2				30 - 130	20	
3&4-Methylphenol (m&p-cresol)	ND	1.0	56	63	11.8				30 - 130	20	
3,3'-Dichlorobenzidine	ND	5.0	85	78	8.6				30 - 130	20	
3-Nitroaniline	ND	5.0	92	90	2.2				30 - 130	20	

QA/QC Data

SDG I.D.: GCA61339

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
4,6-Dinitro-2-methylphenol	ND	1.0	92	87	5.6				30 - 130	20	
4-Bromophenyl phenyl ether	ND	3.5	74	78	5.3				30 - 130	20	
4-Chloro-3-methylphenol	ND	1.0	82	84	2.4				30 - 130	20	
4-Chloroaniline	ND	3.5	88	94	6.6				30 - 130	20	
4-Chlorophenyl phenyl ether	ND	1.0	76	77	1.3				30 - 130	20	
4-Nitroaniline	ND	5.0	84	85	1.2				30 - 130	20	
4-Nitrophenol	ND	1.0	92	86	6.7				15 - 130	20	
Acenaphthene	ND	1.5	75	78	3.9				30 - 130	20	
Acetophenone	ND	3.5	53	60	12.4				30 - 130	20	
Aniline	ND	3.5	50	58	14.8				30 - 130	20	
Benzidine	ND	4.5	99	93	6.3				30 - 130	20	
Benzoic acid	ND	10	49	52	5.9				30 - 130	20	
Benzyl butyl phthalate	ND	1.5	86	83	3.6				30 - 130	20	
Bis(2-chloroethoxy)methane	ND	3.5	60	68	12.5				30 - 130	20	
Bis(2-chloroethyl)ether	ND	1.0	42	49	15.4				30 - 130	20	
Bis(2-chloroisopropyl)ether	ND	1.0	51	61	17.9				30 - 130	20	
Carbazole	ND	5.0	84	80	4.9				30 - 130	20	
Diethyl phthalate	ND	1.5	85	84	1.2				30 - 130	20	
Dimethylphthalate	ND	1.5	79	79	0.0				30 - 130	20	
Di-n-butylphthalate	ND	1.5	89	86	3.4				30 - 130	20	
Di-n-octylphthalate	ND	1.5	89	83	7.0				30 - 130	20	
Isophorone	ND	3.5	65	70	7.4				30 - 130	20	
Naphthalene	ND	1.5	61	68	10.9				30 - 130	20	
N-Nitrosodimethylamine	ND	1.0	34	42	21.1				30 - 130	20	r
N-Nitrosodi-n-propylamine	ND	3.5	65	72	10.2				30 - 130	20	
N-Nitrosodiphenylamine	ND	3.5	71	72	1.4				30 - 130	20	
Phenol	ND	1.0	43	50	15.1				15 - 130	20	
% 2,4,6-Tribromophenol	84	%	95	91	4.3				15 - 110	20	
% 2-Fluorobiphenyl	64	%	63	67	6.2				30 - 130	20	
% 2-Fluorophenol	41	%	30	39	26.1				15 - 110	20	r
% Nitrobenzene-d5	55	%	52	59	12.6				30 - 130	20	
% Phenol-d5	50	%	41	48	15.7				15 - 110	20	
% Terphenyl-d14	75	%	83	80	3.7				30 - 130	20	

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%)

QA/QC Batch 433222 (ug/L), QC Sample No: CA63284 (CA61339, CA61340 (2X, 20X) , CA61341)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	109	112	2.7				70 - 130	30	
1,1,1-Trichloroethane	ND	1.0	105	110	4.7				70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	0.50	111	115	3.5				70 - 130	30	
1,1,2-Trichloroethane	ND	1.0	99	104	4.9				70 - 130	30	
1,1-Dichloroethane	ND	1.0	104	109	4.7				70 - 130	30	
1,1-Dichloroethene	ND	1.0	106	110	3.7				70 - 130	30	
1,1-Dichloropropene	ND	1.0	108	111	2.7				70 - 130	30	
1,2,3-Trichlorobenzene	ND	1.0	102	109	6.6				70 - 130	30	
1,2,3-Trichloropropane	ND	1.0	106	111	4.6				70 - 130	30	
1,2,4-Trichlorobenzene	ND	1.0	103	107	3.8				70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	111	113	1.8				70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	1.0	112	116	3.5				70 - 130	30	
1,2-Dibromoethane	ND	1.0	104	110	5.6				70 - 130	30	
1,2-Dichlorobenzene	ND	1.0	106	109	2.8				70 - 130	30	

QA/QC Data

SDG I.D.: GCA61339

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2-Dichloroethane	ND	1.0	104	106	1.9				70 - 130	30
1,2-Dichloropropane	ND	1.0	104	108	3.8				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	112	113	0.9				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	108	110	1.8				70 - 130	30
1,3-Dichloropropane	ND	1.0	105	108	2.8				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	107	109	1.9				70 - 130	30
2,2-Dichloropropane	ND	1.0	104	106	1.9				70 - 130	30
2-Chlorotoluene	ND	1.0	109	111	1.8				70 - 130	30
2-Hexanone	ND	5.0	88	95	7.7				70 - 130	30
2-Isopropyltoluene	ND	1.0	111	113	1.8				70 - 130	30
4-Chlorotoluene	ND	1.0	109	109	0.0				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	88	94	6.6				70 - 130	30
Acetone	ND	5.0	96	98	2.1				70 - 130	30
Acrylonitrile	ND	5.0	98	103	5.0				70 - 130	30
Benzene	ND	0.70	104	108	3.8				70 - 130	30
Bromobenzene	ND	1.0	110	111	0.9				70 - 130	30
Bromochloromethane	ND	1.0	101	106	4.8				70 - 130	30
Bromodichloromethane	ND	0.50	105	108	2.8				70 - 130	30
Bromoform	ND	1.0	108	114	5.4				70 - 130	30
Bromomethane	ND	1.0	137	145	5.7				70 - 130	30
Carbon Disulfide	ND	1.0	103	106	2.9				70 - 130	30
Carbon tetrachloride	ND	1.0	108	113	4.5				70 - 130	30
Chlorobenzene	ND	1.0	106	109	2.8				70 - 130	30
Chloroethane	ND	1.0	100	105	4.9				70 - 130	30
Chloroform	ND	1.0	102	106	3.8				70 - 130	30
Chloromethane	ND	1.0	103	110	6.6				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	103	108	4.7				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	103	108	4.7				70 - 130	30
Dibromochloromethane	ND	0.50	113	115	1.8				70 - 130	30
Dibromomethane	ND	1.0	100	104	3.9				70 - 130	30
Dichlorodifluoromethane	ND	1.0	114	120	5.1				70 - 130	30
Ethylbenzene	ND	1.0	110	112	1.8				70 - 130	30
Hexachlorobutadiene	ND	0.40	113	114	0.9				70 - 130	30
Isopropylbenzene	ND	1.0	112	112	0.0				70 - 130	30
m&p-Xylene	ND	1.0	107	110	2.8				70 - 130	30
Methyl ethyl ketone	ND	5.0	93	98	5.2				70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	97	101	4.0				70 - 130	30
Methylene chloride	ND	1.0	99	104	4.9				70 - 130	30
Naphthalene	ND	1.0	109	116	6.2				70 - 130	30
n-Butylbenzene	ND	1.0	115	116	0.9				70 - 130	30
n-Propylbenzene	ND	1.0	111	113	1.8				70 - 130	30
o-Xylene	ND	1.0	108	111	2.7				70 - 130	30
p-Isopropyltoluene	ND	1.0	113	115	1.8				70 - 130	30
sec-Butylbenzene	ND	1.0	116	118	1.7				70 - 130	30
Styrene	ND	1.0	107	111	3.7				70 - 130	30
tert-Butylbenzene	ND	1.0	112	113	0.9				70 - 130	30
Tetrachloroethene	ND	1.0	106	109	2.8				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	95	105	10.0				70 - 130	30
Toluene	ND	1.0	105	108	2.8				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	105	110	4.7				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	99	103	4.0				70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	109	114	4.5				70 - 130	30
Trichloroethene	ND	1.0	106	109	2.8				70 - 130	30

QA/QC Data

SDG I.D.: GCA61339

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Trichlorofluoromethane	ND	1.0	104	108	3.8				70 - 130	30	
Trichlorotrifluoroethane	ND	1.0	111	115	3.5				70 - 130	30	
Vinyl chloride	ND	1.0	106	112	5.5				70 - 130	30	
% 1,2-dichlorobenzene-d4	104	%	105	105	0.0				70 - 130	30	
% Bromofluorobenzene	108	%	111	113	1.8				70 - 130	30	
% Dibromofluoromethane	116	%	114	115	0.9				70 - 130	30	
% Toluene-d8	112	%	115	115	0.0				70 - 130	30	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 433113 (ug/L), QC Sample No: CA63410 (CA61343)

Semivolatiles (SIM) - Ground Water

1,2,4,5-Tetrachlorobenzene	ND	0.50	64	67	4.6				30 - 130	20	
2-Methylnaphthalene	ND	0.02	66	66	0.0				30 - 130	20	
Acenaphthene	ND	0.02	65	60	8.0				30 - 130	20	
Acenaphthylene	ND	0.02	61	61	0.0				30 - 130	20	
Anthracene	ND	0.02	73	70	4.2				30 - 130	20	
Benz(a)anthracene	ND	0.02	74	75	1.3				30 - 130	20	
Benzo(a)pyrene	ND	0.02	65	42	43.0				30 - 130	20	r
Benzo(b)fluoranthene	ND	0.02	65	60	8.0				30 - 130	20	
Benzo(ghi)perylene	ND	0.02	60	50	18.2				30 - 130	20	
Benzo(k)fluoranthene	ND	0.02	81	74	9.0				30 - 130	20	
Bis(2-ethylhexyl)phthalate	ND	0.10	85	92	7.9				30 - 130	20	
Chrysene	ND	0.02	72	63	13.3				30 - 130	20	
Dibenz(a,h)anthracene	ND	0.01	62	61	1.6				30 - 130	20	
Dibenzofuran	ND	0.05	64	64	0.0				30 - 130	20	
Fluoranthene	ND	0.02	68	72	5.7				30 - 130	20	
Fluorene	ND	0.02	67	67	0.0				30 - 130	20	
Hexachlorobenzene	ND	0.02	77	83	7.5				30 - 130	20	
Hexachlorobutadiene	ND	0.05	57	62	8.4				30 - 130	20	
Hexachlorocyclopentadiene	ND	0.05	35	43	20.5				30 - 130	20	
Hexachloroethane	ND	0.05	50	53	5.8				30 - 130	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	61	55	10.3				30 - 130	20	
Naphthalene	ND	0.02	58	61	5.0				30 - 130	20	
Nitrobenzene	ND	0.05	62	66	6.3				30 - 130	20	
Pentachloronitrobenzene	ND	0.10	77	89	14.5				30 - 130	20	
Pentachlorophenol	ND	0.20	96	114	17.1				30 - 130	20	
Phenanthrene	ND	0.02	72	71	1.4				30 - 130	20	
Pyrene	ND	0.02	68	56	19.4				30 - 130	20	
Pyridine	ND	0.50	43	43	0.0				30 - 130	20	
% 2,4,6-Tribromophenol	78	%	79	94	17.3				15 - 110	20	
% 2-Fluorobiphenyl	61	%	63	64	1.6				30 - 130	20	
% 2-Fluorophenol	53	%	44	45	2.2				15 - 110	20	
% Nitrobenzene-d5	66	%	55	62	12.0				30 - 130	20	
% Phenol-d5	63	%	43	24	56.7				15 - 110	20	r
% Terphenyl-d14	76	%	75	79	5.2				30 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

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%)

QA/QC Data

SDG I.D.: GCA61339

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 433113 (ug/L), QC Sample No: CA63410 (CA61343)											
Semivolatiles - Ground Water											
1,2,4-Trichlorobenzene	ND	3.5	63	69	9.1				30 - 130	20	
1,2-Dichlorobenzene	ND	1.0	59	57	3.4				30 - 130	20	
1,2-Diphenylhydrazine	ND	1.6	81	33	84.2				30 - 130	20	r
1,3-Dichlorobenzene	ND	1.0	56	53	5.5				30 - 130	20	
1,4-Dichlorobenzene	ND	1.0	57	58	1.7				30 - 130	20	
2,4,5-Trichlorophenol	ND	1.0	76	79	3.9				30 - 130	20	
2,4,6-Trichlorophenol	ND	1.0	72	74	2.7				30 - 130	20	
2,4-Dichlorophenol	ND	1.0	68	75	9.8				30 - 130	20	
2,4-Dimethylphenol	ND	1.0	76	80	5.1				30 - 130	20	
2,4-Dinitrophenol	ND	1.0	75	80	6.5				30 - 130	20	
2,4-Dinitrotoluene	ND	3.5	87	84	3.5				30 - 130	20	
2,6-Dinitrotoluene	ND	3.5	78	82	5.0				30 - 130	20	
2-Chloronaphthalene	ND	3.5	70	69	1.4				30 - 130	20	
2-Chlorophenol	ND	1.0	53	56	5.5				30 - 130	20	
2-Methylphenol (o-cresol)	ND	1.0	64	61	4.8				30 - 130	20	
2-Nitroaniline	ND	3.5	128	128	0.0				30 - 130	20	
2-Nitrophenol	ND	1.0	74	78	5.3				30 - 130	20	
3&4-Methylphenol (m&p-cresol)	ND	1.0	66	67	1.5				30 - 130	20	
3,3'-Dichlorobenzidine	ND	5.0	82	82	0.0				30 - 130	20	
3-Nitroaniline	ND	5.0	97	97	0.0				30 - 130	20	
4,6-Dinitro-2-methylphenol	ND	1.0	81	82	1.2				30 - 130	20	
4-Bromophenyl phenyl ether	ND	3.5	76	77	1.3				30 - 130	20	
4-Chloro-3-methylphenol	ND	1.0	82	93	12.6				30 - 130	20	
4-Chloroaniline	ND	3.5	82	82	0.0				30 - 130	20	
4-Chlorophenyl phenyl ether	ND	1.0	73	73	0.0				30 - 130	20	
4-Nitroaniline	ND	5.0	85	80	6.1				30 - 130	20	
4-Nitrophenol	ND	1.0	87	87	0.0				15 - 130	20	
Acetophenone	ND	3.5	68	69	1.5				30 - 130	20	
Aniline	ND	3.5	63	63	0.0				30 - 130	20	
Benzidine	ND	4.5	36	36	0.0				30 - 130	20	
Benzoic acid	ND	10	59	92	43.7				30 - 130	20	r
Benzyl butyl phthalate	ND	1.5	83	24	110.3				30 - 130	20	l,r
Bis(2-chloroethoxy)methane	ND	3.5	66	66	0.0				30 - 130	20	
Bis(2-chloroethyl)ether	ND	1.0	51	53	3.8				30 - 130	20	
Bis(2-chloroisopropyl)ether	ND	1.0	46	50	8.3				30 - 130	20	
Carbazole	ND	5.0	85	85	0.0				30 - 130	20	
Diethyl phthalate	ND	1.5	80	78	2.5				30 - 130	20	
Dimethylphthalate	ND	1.5	80	75	6.5				30 - 130	20	
Di-n-butylphthalate	ND	1.5	83	80	3.7				30 - 130	20	
Di-n-octylphthalate	ND	1.5	84	82	2.4				30 - 130	20	
Isophorone	ND	3.5	70	76	8.2				30 - 130	20	
N-Nitrosodimethylamine	ND	1.0	46	50	8.3				30 - 130	20	
N-Nitrosodi-n-propylamine	ND	3.5	73	78	6.6				30 - 130	20	
N-Nitrosodiphenylamine	ND	3.5	71	56	23.6				30 - 130	20	r
Phenol	ND	1.0	53	50	5.8				15 - 130	20	
% 2,4,6-Tribromophenol	80	%	87	86	1.2				15 - 110	20	
% 2-Fluorobiphenyl	63	%	67	66	1.5				30 - 130	20	
% 2-Fluorophenol	42	%	42	42	0.0				15 - 110	20	
% Nitrobenzene-d5	63	%	67	67	0.0				30 - 130	20	
% Phenol-d5	53	%	48	23	70.4				15 - 110	20	r

QA/QC Data

SDG I.D.: GCA61339

Parameter	Blank	Blk RL		LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% Terphenyl-d14	75	%		82	83	1.2				30 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

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%)

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
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
June 11, 2018

Monday, June 11, 2018

Criteria: CT: RV, SWP

State: CT

Sample Criteria Exceedances Report

GCA61339 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CA61340	$8260GWR	Naphthalene	CT / RSR SWPC (ug/l) / APS Organics	290	20	210	210	ug/L
CA61340	$8270-CTSIMR	Phenanthrene	CT / RSR SWPC (ug/l) / Semivolatiles	3.0	0.05	0.077	0.077	ug/L
CA61340	$8270-CTSIMR	Dibenzofuran	CT / RSR SWPC (ug/l) / Semivolatiles	0.48	0.05	0.077	0.077	ug/L
CA61340	$8270-CTSIMR	Acenaphthylene	CT / RSR SWPC (ug/l) / Semivolatiles	4.2	0.05	0.3	0.3	ug/L
CA61340	$ETPH_WMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR SWPC (ug/l) / APS Organics	0.89	0.066	0.25	0.25	mg/L
CA61342	$8270-CTSIMR	Phenanthrene	CT / RSR SWPC (ug/l) / Semivolatiles	0.33	0.05	0.077	0.077	ug/L
CA61342	$8270-CTSIMR	Acenaphthylene	CT / RSR SWPC (ug/l) / Semivolatiles	0.41	0.05	0.3	0.3	ug/L
CA61342	$ETPH_WMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR SWPC (ug/l) / APS Organics	0.34	0.066	0.25	0.25	mg/L

Phoenix Laboratories does not assume responsibility for the data contained in this 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.

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

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

Project Location: ROCKVILLE MGP ***Project Number:***

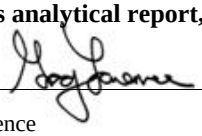
Laboratory Sample ID(s): CA61339-CA61344 ***Sampling Date(s):*** 5/30/2018

List RCP Methods Used (e.g., 8260, 8270, et cetera) 6010, 7470/7471, 8260, 8270, ETPH, 9010/9012

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	***VPH and EPH methods only:*** **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 Reasonable Confidence Protocol documents acheived? See Sections: SVOA Narration, SVOASIM Narration, VOA Narration.**	☐ Yes ☑ No
5	**a) Were reporting limits specified or referenced on the chain-of-custody?** **b) Were these reporting limits met?**	☑ Yes ☐ No ☑ 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 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:** Monday, June 11, 2018

Name of Laboratory Phoenix Environmental Labs, Inc.

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

CTDEP RCP Laboratory Analysis QA/QC Certification Form - November 2007
Laboratory Quality Assurance and Quality Control Guidance Reasonable Confidence Protocols

PHOENIX

Environmental Laboratories, Inc.
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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

June 11, 2018

SDG I.D.: GCA61339

Cyanide Narration

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

Instrument:

LACHAT 06/05/18-1 Dustin Harrison, Greg Danielewski, Chemist 06/05/18

CA61339, CA61340, CA61341, CA61342, CA61343

The samples were distilled in accordance with the method.
The initial calibration met criteria.

The calibration check standards (ICV,CCV) were within 15% of true value and were analyzed at a frequencey of one per ten samples.
The continuing calibration blanks (ICB,CCB) had concentrations less than the reporting level.

The method blank, laboratory control sample (LCS), and matrix spike were distilled with the samples.

QC (Site Specific):

Batch 433119 (CA61339)

CA61339, CA61340, CA61341, CA61342, CA61343

All LCS recoveries were within 90 - 110 with the following exceptions: None.
All MS recoveries were within 90 - 110 with the following exceptions: None.
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils

ETPH Narration

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

Instrument:

AU-FID84 06/05/18-1 Jeff Bucko, Chemist 06/05/18

CA61339, CA61340, CA61341, CA61342, CA61343

The initial calibration (ETPH525I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 433110 (CA61339)

CA61339, CA61340, CA61341, CA61342, CA61343

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:

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Certification Report

June 11, 2018

SDG I.D.: GCA61339

Mercury Narration

MERLIN 05/31/18 07:48 Rick Schweitzer, Chemist 05/31/18

CA61342, CA61343

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.

MERLIN 06/01/18 07:48 Rick Schweitzer, Chemist 06/01/18

CA61339, CA61340, CA61341

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 432639 (CA60946)

CA61342, CA61343

All LCS recoveries were within 80 - 120 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%.

Batch 432640 (CA60561)

CA61339, CA61340, CA61341

All LCS recoveries were within 80 - 120 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? Yes.

Instrument:

BLUE 06/01/18 07:05 Emily Kolominskaya, Mike Arsenault, Chemist 06/01/18

CA61339, CA61340, CA61341, CA61342, CA61343

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily

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Certification Report

June 11, 2018

SDG I.D.: GCA61339

ICP Metals Narration

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 432731 (CA60713)

CA61339

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

Batch 432732 (CA61539)

CA61340, CA61341, CA61342, CA61343

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

ICPMS Metals Narration

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

Instrument:

ICPMS 06/01/18 16:00 Cindy Pearce, Phyllis Shiller, Chemist 06/01/18

CA61339, CA61340, CA61341, CA61342, CA61343

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 samples did not meet internal standard criteria: None.

QC (Site Specific):

Batch 432747 (CA61339)

CA61339, CA61340, CA61341, CA61342, CA61343

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

SVOA Narration

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RCP Certification Report

June 11, 2018

SDG I.D.: GCA61339

SVOA Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? No.

QC Batch 432741 (Samples: CA61339, CA61340, CA61341, CA61342): -----

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s). A slight variability is possible. (1,2-Dichlorobenzene, 1,3-Dichlorobenzene, N-Nitrosodimethylamine, % 2-Fluorophenol)

QC Batch 433113 (Samples: CA61343): -----

The LCSD recovery is below the lower range but within the method criteria. The LCS is acceptable, therefore no significant bias is suspected. (Benzyl butyl phthalate)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s). A slight variability is possible. (1,2-Diphenylhydrazine, Benzoic acid, Benzyl butyl phthalate, N-Nitrosodiphenylamine, % Phenol-d5)

Instrument:

CHEM19 06/04/18-1 Damien Drobinski, Chemist 06/04/18

CA61339, CA61340, CA61341, CA61342

The DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

Initial Calibration Verification (CHEM19/SPLIT_0525):
95% of target compounds met criteria.
The following compounds had %RSDs >20%: 2,4-Dinitrophenol 23% (20%), Benzidine 23% (20%), Di-n-octylphthalate 24% (20%)
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.073 (0.1), Bis(2-chloroethyl)ether 0.547 (0.7)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM19/0604_02-SPLIT_0525):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
97% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 2,4-Dinitrophenol 37%L (30%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.078 (0.1), Bis(2-chloroethoxy)methane 0.292 (0.3), Bis(2-chloroethyl)ether 0.418 (0.7)
The following compounds did not meet minimum response factors: None.

CHEM27 06/07/18-1 Damien Drobinski, Chemist 06/07/18

CA61343

Initial Calibration Verification (CHEM27/SPLIT_0518):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: 2,4-Dinitrophenol 22% (20%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM27/0607_02-SPLIT_0518):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

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RCP Certification Report

June 11, 2018

SDG I.D.: GCA61339

SVOA Narration

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.

CHEM29 06/05/18-1 Damien Drobinski, Chemist 06/05/18

CA61340

Initial Calibration Verification (CHEM29/SPLIT_0530):
98% 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 (CHEM29/0605_02-SPLIT_0530):
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 432741 (CA61703)

CA61339, CA61340, CA61341, CA61342

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 20% with the following exceptions: % 2-Fluorophenol(26.1%), 1,2-Dichlorobenzene(21.3%), 1,3-Dichlorobenzene(20.7%), N-Nitrosodimethylamine(21.1%)
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%)

Batch 433113 (CA63410)

CA61343

All LCS recoveries were within 30 - 130 with the following exceptions: None.
All LCSD recoveries were within 30 - 130 with the following exceptions: Benzyl butyl phthalate(24%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: % Phenol-d5(70.4%), 1,2-Diphenylhydrazine(84.2%), Benzoic acid(43.7%), Benzyl butyl phthalate(110.3%), N-Nitrosodiphenylamine(23.6%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
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%)
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%)

SVOASIM Narration

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RCP Certification Report

June 11, 2018

SDG I.D.: GCA61339

SVOASIM Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? No.

QC Batch 432741 (Samples: CA61339, CA61340, CA61341, CA61342): -----

A trace amount of an analyte was found in blank. Due to the concentration in the blank relative to the samples, no bias is suspected. (Naphthalene(CA61340, CA61342))

Analyte was found in blank. A high bias is suspected. (Naphthalene(CA61339))

QC Batch 433113 (Samples: CA61343): -----

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s). A slight variability is possible. (Benzo(a)pyrene, % Phenol-d5)

Instrument:

CHEM25 06/04/18-1 Damien Drobinski, Chemist 06/04/18

CA61339, CA61340, CA61341, CA61342

Initial Calibration Verification (CHEM25/SIM_0410):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: Hexachloroethane 0.265 (0.3)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM25/0604_02-SIM_0410):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% 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: Hexachloroethane 0.264 (0.3)
The following compounds did not meet minimum response factors: None.

CHEM25 06/06/18-1 Damien Drobinski, Chemist 06/06/18

CA61343

Initial Calibration Verification (CHEM25/SIM_0410):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: Hexachloroethane 0.265 (0.3)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM25/0606_02-SIM_0410):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% 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 432741 (CA61703)

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RCP Certification Report

June 11, 2018

SDG I.D.: GCA61339

SVOASIM Narration

CA61339, CA61340, CA61341, CA61342

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 20% 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%)

Batch 433113 (CA63410)

CA61343

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 20% with the following exceptions: % Phenol-d5(56.7%), Benzo(a)pyrene(43.0%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
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%)

VOA Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? No.

QC Batch 433222 (Samples: CA61339, CA61340, CA61341): -----

The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (Bromomethane)

QC Batch 433254 (Samples: CA61342, CA61343, CA61344): -----

The LCS/LCSD recovery for one analyte is below the lower range but within the method criteria. A low bias for this analyte is possible. (Acetone)

The LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (Dichlorodifluoromethane)

The LCSD recovery is below the lower range but within the method criteria. The LCS recovery is acceptable. A slight low bias is possible. (Methyl ethyl ketone, Tetrahydrofuran (THF))

Instrument:

CHEM02 06/04/18-2 Michael Hahn, Chemist 06/04/18

CA61339, CA61340, CA61341

Initial Calibration Verification (CHEM02/VT-P0602):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 21% (20%), Bromomethane 25% (20%)
The following compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.033 (0.05), Acetone 0.054 (0.1), Bromoform 0.086 (0.1), Methyl ethyl ketone 0.085 (0.1)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM02/0604P30-VT-P0602):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.

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RCP Certification Report

June 11, 2018

SDG I.D.: GCA61339

VOA Narration

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: 1,2-Dibromo-3-chloropropane 0.029 (0.05), Bromoform 0.083 (0.1), Tetrahydrofuran (THF) 0.046 (0.05)
The following compounds did not meet minimum response factors: None.

CHEM17 06/04/18-1 Michael Hahn, Chemist 06/04/18

CA61342, CA61343, CA61344

Initial Calibration Verification (CHEM17/VT-S0603):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 40% (20%), Acetone 28% (20%), Methyl ethyl ketone 27% (20%)
The following compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.036 (0.05), Acetone 0.068 (0.1), Methyl ethyl ketone 0.091 (0.1), Tetrahydrofuran (THF) 0.048 (0.05)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM17/0604_02-VT-S0603):
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: 1,2-Dibromo-3-chloropropane 0.036 (0.05), Tetrahydrofuran (THF) 0.039 (0.05)
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 433222 (CA63284)

CA61339, CA61340, CA61341

All LCS recoveries were within 70 - 130 with the following exceptions: Bromomethane(137%)
All LCSD recoveries were within 70 - 130 with the following exceptions: Bromomethane(145%)
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Batch 433254 (CA61344)

CA61342, CA61343, CA61344

All LCS recoveries were within 70 - 130 with the following exceptions: Acetone(55%)
All LCSD recoveries were within 70 - 130 with the following exceptions: Acetone(55%), Dichlorodifluoromethane(136%), Methyl ethyl ketone(59%), Tetrahydrofuran (THF)(69%)
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Temperature Narration

The samples were received at 3.7C with cooling initiated.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler: Yes ☒ No ☐
Coolant: IPK ☐ ICE ☒ No ☐

Temp 3.0°C Pg 1 of 1

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

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

Data Delivery/Contact Options:
☐ Fax:
☐ Phone:
☒ Email: LEwilley@tighebond.com

Customer: Tighe & Bond
Address: 213 Court St
Suite 1100
Middletown, CT

Project: Rockville MGP
Report to: Lynn Willey
Invoice to: Tighe & Bond

Project P.O: 14755443

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 5/30/18

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

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOC	ETPH	SVOC	RSR metals	Cyanide	GL Amber 8 oz. w/H3PO4	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container ( ) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
61339	MW-3BR	GW	5/30/18	10:25	X	X	X	X	X							3	3			1	1
61340	MW-19D	GW	5/30/18	9:08	X	X	X	X	X							3	3			1	1
61341	MW-23S	GW	5/30/18	9:25	X	X	X	X	X							3	3			1	1
61342	MW-10BR	GW	5/30/18	12:57	X	X	X	X	X							3	3			1	1
61343	EQ Blank	GW	5/30/18	16:30	X	X	X	X	X							3	3			1	1
61344	Trip Blank																				

Relinquished by:	Accepted by:	Date:	Time:
T+B		5/30/18	17:35

Comments, Special Requirements or Regulations:
Eversource DAS Pricing

Turnaround:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☒ Standard
☐ Other
* SURCHARGE APPLIES

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☒ RCP Cert
☐ GW Protection
☒ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☒ Other Res VC

MA
☐ MCP Certification
☐ GW-1
☐ GW-2
☐ GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: CT

Data Format
☒ Excel
☒ PDF
☐ GIS/Key
☐ EQuIS
☒ Other Certain

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☒ Phoenix Std Report
☐ Other
* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Thursday, June 07, 2018

Attn: Ms.Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Project ID: ROCKVILLE MGP
Sample ID#s: CA58993 - CA59005

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.

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

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

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

Environmental Laboratories, Inc.
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NY # 11301

SDG Comments

June 07, 2018

SDG I.D.: GCA58993

Volatile 8260 analysis:
1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane do not meet GWP criteria, this compound is analyzed by GC/ECD to achieve this criteria.

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

Analysis Report

June 07, 2018

FOR: Attn: Ms.Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/24/18	10:22
Location Code:	TIGHE-DAS	Received by:	LB	05/24/18	17:59
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA58993
Phoenix ID: CA58993

Project ID: ROCKVILLE MGP
Client ID: MW-1S

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Arsenic	< 0.004	0.004	mg/L	1	05/29/18	MA	SW6010C
Barium	0.273	0.002	mg/L	1	05/29/18	MA	SW6010C
Beryllium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Cadmium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Chromium	0.015	0.001	mg/L	1	05/29/18	MA	SW6010C
Copper	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Mercury	< 0.0002	0.0002	mg/L	1	05/25/18	MA	SW7470A
Nickel	0.006	0.001	mg/L	1	05/29/18	MA	SW6010C
Lead	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Antimony	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Selenium	< 0.010	0.010	mg/L	1	05/29/18	MA	SW6010C
Thallium	< 0.0005	0.0005	mg/L	5	05/29/18	CPP	SW6020B
Vanadium	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Zinc	0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Total Cyanide	< 0.010	0.010	mg/L	1	05/29/18	O/GD	SW9010C/SW9012B
Extraction of CT ETPH	Completed				05/30/18	P/D	SW3510C/SW3520C
Mercury Digestion	Completed				05/25/18	I/I	SW7470A
Semi-Volatile Extraction	Completed				05/29/18	P/R/D	SW3520C
Total Metals Digestion	Completed				05/26/18	AG	
Total Metals Digestion MS	Completed				05/25/18	AG	
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	0.079	0.066	mg/L	1	05/31/18	JRB	CTETPH 8015D
Identification	**		mg/L	1	05/31/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	69		%	1	05/31/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-1S

Phoenix I.D.: CA58993

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2,4-Trimethylbenzene	1.4	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	05/26/18	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	05/26/18	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
Acetone	ND	25	ug/L	1	05/26/18	MH	SW8260C
Acrylonitrile	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
Benzene	ND	0.70	ug/L	1	05/26/18	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	05/26/18	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	05/26/18	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-1S

Phoenix I.D.: CA58993

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Naphthalene	1.4	1.0	ug/L	1	05/26/18	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Styrene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	05/26/18	MH	SW8260C
Toluene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Total Xylenes	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	05/26/18	MH	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	93		%	1	05/26/18	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	05/26/18	MH	70 - 130 %
% Dibromofluoromethane	92		%	1	05/26/18	MH	70 - 130 %
% Toluene-d8	93		%	1	05/26/18	MH	70 - 130 %
Semivolatiles							
1,2,4-Trichlorobenzene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
1,2-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	KCA	SW8270D
1,2-Diphenylhydrazine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
1,3-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	KCA	SW8270D
1,4-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	KCA	SW8270D
2,4,5-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4,6-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dichlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dimethylphenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dinitrophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2,6-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2-Chloronaphthalene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2-Chlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2-Nitroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2-Nitrophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	9.4	ug/L	1	05/31/18	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
3-Nitroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-1S

Phoenix I.D.: CA58993

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4,6-Dinitro-2-methylphenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
4-Chloro-3-methylphenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
4-Chloroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
4-Nitroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
4-Nitrophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
Acetophenone	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Aniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Benzidine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Benzoic acid	ND	47	ug/L	1	05/31/18	KCA	SW8270D
Benzyl butyl phthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Carbazole	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Diethyl phthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Dimethylphthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Di-n-butylphthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Di-n-octylphthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Isophorone	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
N-Nitrosodimethylamine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
N-Nitrosodiphenylamine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Phenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	78		%	1	05/31/18	KCA	15 - 110 %
% 2-Fluorobiphenyl	77		%	1	05/31/18	KCA	30 - 130 %
% 2-Fluorophenol	58		%	1	05/31/18	KCA	15 - 110 %
% Nitrobenzene-d5	72		%	1	05/31/18	KCA	30 - 130 %
% Phenol-d5	60		%	1	05/31/18	KCA	15 - 110 %
% Terphenyl-d14	80		%	1	05/31/18	KCA	30 - 130 %
Semivolatiles (SIM)							
1,2,4,5-Tetrachlorobenzene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
2-Methylnaphthalene	ND	0.94	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthene	6.8	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthylene	0.63	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Anthracene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benz(a)anthracene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(a)pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.19	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Bis(2-ethylhexyl)phthalate	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.01	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenzofuran	0.10	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluoranthene	0.26	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluorene	0.35	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-1S

Phoenix I.D.: CA58993

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Hexachlorobenzene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorobutadiene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorocyclopentadiene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachloroethane	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Naphthalene	0.15	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Nitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachloronitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachlorophenol	ND	0.75	ug/L	1	05/31/18	DD	SW8270D (SIM)
Phenanthrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyrene	0.29	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyridine	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
QA/QC Surrogates							
% 2,4,6-Tribromophenol	100		%	1	05/31/18	DD	15 - 110 %
% 2-Fluorobiphenyl	70		%	1	05/31/18	DD	30 - 130 %
% 2-Fluorophenol	61		%	1	05/31/18	DD	15 - 110 %
% Nitrobenzene-d5	73		%	1	05/31/18	DD	30 - 130 %
% Phenol-d5	73		%	1	05/31/18	DD	15 - 110 %
% Terphenyl-d14	69		%	1	05/31/18	DD	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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.



Phyllis Shiller, Laboratory Director
June 07, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

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

Analysis Report

June 07, 2018

FOR: Attn: Ms.Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/24/18	8:57
Location Code:	TIGHE-DAS	Received by:	LB	05/24/18	17:59
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA58993
Phoenix ID: CA58994

Project ID: ROCKVILLE MGP
Client ID: MW-1D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Arsenic	< 0.004	0.004	mg/L	1	05/29/18	MA	SW6010C
Barium	0.321	0.002	mg/L	1	05/29/18	MA	SW6010C
Beryllium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Cadmium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Chromium	0.683	0.001	mg/L	1	05/29/18	MA	SW6010C
Copper	0.219	0.005	mg/L	1	05/29/18	MA	SW6010C
Mercury	< 0.0002	0.0002	mg/L	1	05/25/18	MA	SW7470A
Nickel	5.67	0.010	mg/L	10	05/30/18	MA	SW6010C
Lead	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Antimony	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Selenium	< 0.010	0.010	mg/L	1	05/29/18	MA	SW6010C
Thallium	< 0.0005	0.0005	mg/L	5	05/29/18	CPP	SW6020B
Vanadium	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Zinc	0.048	0.002	mg/L	1	05/29/18	MA	SW6010C
Total Cyanide	< 0.010	0.010	mg/L	1	05/29/18	O/GD	SW9010C/SW9012B
Extraction of CT ETPH	Completed				05/30/18	P/D	SW3510C/SW3520C
Mercury Digestion	Completed				05/25/18	I/I	SW7470A
Semi-Volatile Extraction	Completed				05/29/18	P/R/D	SW3520C
Total Metals Digestion	Completed				05/26/18	AG	
Total Metals Digestion MS	Completed				05/25/18	AG	
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	0.067	mg/L	1	05/31/18	JRB	CTETPH 8015D
Identification	ND		mg/L	1	05/31/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	68		%	1	05/31/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-1D

Phoenix I.D.: CA58994

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	05/26/18	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	05/26/18	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
Acetone	ND	25	ug/L	1	05/26/18	MH	SW8260C
Acrylonitrile	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
Benzene	ND	0.70	ug/L	1	05/26/18	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	05/26/18	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	05/26/18	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-1D

Phoenix I.D.: CA58994

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Styrene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	05/26/18	MH	SW8260C
Toluene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Total Xylenes	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	05/26/18	MH	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	94		%	1	05/26/18	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	05/26/18	MH	70 - 130 %
% Dibromofluoromethane	92		%	1	05/26/18	MH	70 - 130 %
% Toluene-d8	94		%	1	05/26/18	MH	70 - 130 %
Semivolatiles							
1,2,4-Trichlorobenzene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
1,2-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	KCA	SW8270D
1,2-Diphenylhydrazine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
1,3-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	KCA	SW8270D
1,4-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	KCA	SW8270D
2,4,5-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4,6-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dichlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dimethylphenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dinitrophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2,6-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2-Chloronaphthalene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2-Chlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2-Nitroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2-Nitrophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	9.4	ug/L	1	05/31/18	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
3-Nitroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-1D

Phoenix I.D.: CA58994

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4,6-Dinitro-2-methylphenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
4-Chloro-3-methylphenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
4-Chloroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
4-Nitroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
4-Nitrophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
Acetophenone	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Aniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Benzidine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Benzoic acid	ND	47	ug/L	1	05/31/18	KCA	SW8270D
Benzyl butyl phthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Carbazole	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Diethyl phthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Dimethylphthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Di-n-butylphthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Di-n-octylphthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Isophorone	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
N-Nitrosodimethylamine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
N-Nitrosodiphenylamine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Phenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	62		%	1	05/31/18	KCA	15 - 110 %
% 2-Fluorobiphenyl	77		%	1	05/31/18	KCA	30 - 130 %
% 2-Fluorophenol	53		%	1	05/31/18	KCA	15 - 110 %
% Nitrobenzene-d5	68		%	1	05/31/18	KCA	30 - 130 %
% Phenol-d5	56		%	1	05/31/18	KCA	15 - 110 %
% Terphenyl-d14	77		%	1	05/31/18	KCA	30 - 130 %
Semivolatiles (SIM)							
1,2,4,5-Tetrachlorobenzene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
2-Methylnaphthalene	ND	0.94	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthylene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Anthracene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benz(a)anthracene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(a)pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.19	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Bis(2-ethylhexyl)phthalate	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.01	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenzofuran	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-1D

Phoenix I.D.: CA58994

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Hexachlorobenzene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorobutadiene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorocyclopentadiene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachloroethane	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Naphthalene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Nitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachloronitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachlorophenol	ND	0.75	ug/L	1	05/31/18	DD	SW8270D (SIM)
Phenanthrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyridine	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
QA/QC Surrogates							
% 2,4,6-Tribromophenol	100		%	1	05/31/18	DD	15 - 110 %
% 2-Fluorobiphenyl	68		%	1	05/31/18	DD	30 - 130 %
% 2-Fluorophenol	60		%	1	05/31/18	DD	15 - 110 %
% Nitrobenzene-d5	76		%	1	05/31/18	DD	30 - 130 %
% Phenol-d5	73		%	1	05/31/18	DD	15 - 110 %
% Terphenyl-d14	67		%	1	05/31/18	DD	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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
June 07, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

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

Analysis Report

June 07, 2018

FOR: Attn: Ms.Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/24/18	9:00
Location Code:	TIGHE-DAS	Received by:	LB	05/24/18	17:59
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA58993
Phoenix ID: CA58995

Project ID: ROCKVILLE MGP
Client ID: MW-3S

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Arsenic	< 0.004	0.004	mg/L	1	05/29/18	MA	SW6010C
Barium	0.048	0.002	mg/L	1	05/29/18	MA	SW6010C
Beryllium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Cadmium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Chromium	0.006	0.001	mg/L	1	05/29/18	MA	SW6010C
Copper	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Mercury	< 0.0002	0.0002	mg/L	1	05/30/18	RS	SW7470A
Nickel	0.028	0.001	mg/L	1	05/29/18	MA	SW6010C
Lead	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Antimony	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Selenium	< 0.010	0.010	mg/L	1	05/29/18	MA	SW6010C
Thallium	< 0.0005	0.0005	mg/L	5	05/29/18	CPP	SW6020B
Vanadium	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Zinc	0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Total Cyanide	< 0.010	0.010	mg/L	1	05/31/18	O/GD	SW9010C/SW9012B
Extraction of CT ETPH	Completed				05/30/18	P/D	SW3510C/SW3520C
Mercury Digestion	Completed				05/30/18	I/I	SW7470A
Semi-Volatile Extraction	Completed				05/29/18	P/R/D	SW3520C
Total Metals Digestion	Completed				05/26/18	AG	
Total Metals Digestion MS	Completed				05/25/18	AG	
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	1.0	0.066	mg/L	1	05/31/18	JRB	CTETPH 8015D
Identification	**		mg/L	1	05/31/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	70		%	1	05/31/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-3S

Phoenix I.D.: CA58995

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2,4-Trimethylbenzene	21	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	05/26/18	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	05/26/18	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,3,5-Trimethylbenzene	11	1.0	ug/L	1	05/26/18	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
Acetone	ND	25	ug/L	1	05/26/18	MH	SW8260C
Acrylonitrile	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
Benzene	45	14	ug/L	20	05/27/18	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	05/26/18	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Ethylbenzene	60	20	ug/L	20	05/27/18	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	05/26/18	MH	SW8260C
Isopropylbenzene	2.7	1.0	ug/L	1	05/26/18	MH	SW8260C

Ver 1

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Phoenix I.D.: CA58995

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	87	20	ug/L	20	05/27/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Naphthalene	210	20	ug/L	20	05/27/18	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
o-Xylene	69	20	ug/L	20	05/27/18	MH	SW8260C
p-Isopropyltoluene	1.4	1.0	ug/L	1	05/26/18	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Styrene	5.8	1.0	ug/L	1	05/26/18	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	05/26/18	MH	SW8260C
Toluene	86	20	ug/L	20	05/27/18	MH	SW8260C
Total Xylenes	156	20	ug/L	20	05/27/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	05/26/18	MH	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	97		%	1	05/26/18	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	05/26/18	MH	70 - 130 %
% Dibromofluoromethane	105		%	1	05/26/18	MH	70 - 130 %
% Toluene-d8	95		%	1	05/26/18	MH	70 - 130 %
Semivolatiles							
1,2,4-Trichlorobenzene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
1,2-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	KCA	SW8270D
1,2-Diphenylhydrazine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
1,3-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	KCA	SW8270D
1,4-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	KCA	SW8270D
2,4,5-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4,6-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dichlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dimethylphenol	8.3	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dinitrophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2,6-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2-Chloronaphthalene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2-Chlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2-Methylphenol (o-cresol)	1.2	0.94	ug/L	1	05/31/18	KCA	SW8270D
2-Nitroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2-Nitrophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	9.4	ug/L	1	05/31/18	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
3-Nitroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D

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Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
4,6-Dinitro-2-methylphenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D	
4-Bromophenyl phenyl ether	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
4-Chloro-3-methylphenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D	
4-Chloroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
4-Chlorophenyl phenyl ether	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D	
4-Nitroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
4-Nitrophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D	
Acetophenone	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
Aniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
Benzidine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
Benzoic acid	ND	47	ug/L	1	05/31/18	KCA	SW8270D	
Benzyl butyl phthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
Bis(2-chloroethoxy)methane	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
Bis(2-chloroethyl)ether	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D	
Bis(2-chloroisopropyl)ether	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
Carbazole	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
Diethyl phthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
Dimethylphthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
Di-n-butylphthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
Di-n-octylphthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
Isophorone	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
N-Nitrosodimethylamine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
N-Nitrosodi-n-propylamine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
N-Nitrosodiphenylamine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D	
Phenol	8.2	0.94	ug/L	1	05/31/18	KCA	SW8270D	
QA/QC Surrogates								
% 2,4,6-Tribromophenol	116		%	1	05/31/18	KCA	15 - 110 %	3
% 2-Fluorobiphenyl	76		%	1	05/31/18	KCA	30 - 130 %	
% 2-Fluorophenol	50		%	1	05/31/18	KCA	15 - 110 %	
% Nitrobenzene-d5	72		%	1	05/31/18	KCA	30 - 130 %	
% Phenol-d5	54		%	1	05/31/18	KCA	15 - 110 %	
% Terphenyl-d14	77		%	1	05/31/18	KCA	30 - 130 %	
Semivolatiles (SIM)								
1,2,4,5-Tetrachlorobenzene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)	
2-Methylnaphthalene	ND	0.94	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Acenaphthene	2.6	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Acenaphthylene	1.3	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Anthracene	0.58	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Benz(a)anthracene	0.20	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Benzo(a)pyrene	0.39	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Benzo(b)fluoranthene	0.23	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Benzo(ghi)perylene	0.24	0.19	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Benzo(k)fluoranthene	0.29	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Bis(2-ethylhexyl)phthalate	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Chrysene	0.24	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Dibenz(a,h)anthracene	0.05	0.01	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Dibenzofuran	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Fluoranthene	0.42	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Fluorene	0.25	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)	

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-3S

Phoenix I.D.: CA58995

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Hexachlorobenzene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Hexachlorobutadiene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Hexachlorocyclopentadiene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Hexachloroethane	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Indeno(1,2,3-cd)pyrene	0.18	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Naphthalene	0.25	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Nitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Pentachloronitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Pentachlorophenol	ND	0.75	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Phenanthrene	0.07	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Pyrene	0.71	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Pyridine	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)	
QA/QC Surrogates								
% 2,4,6-Tribromophenol	113		%	1	05/31/18	DD	15 - 110 %	3
% 2-Fluorobiphenyl	71		%	1	05/31/18	DD	30 - 130 %	
% 2-Fluorophenol	61		%	1	05/31/18	DD	15 - 110 %	
% Nitrobenzene-d5	76		%	1	05/31/18	DD	30 - 130 %	
% Phenol-d5	67		%	1	05/31/18	DD	15 - 110 %	
% Terphenyl-d14	76		%	1	05/31/18	DD	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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

Semi-Volatile Comment:
One of the surrogate recoveries was above the upper range due to sample matrix interference. The other surrogates associated with this sample were within QA/QC criteria. No significant bias is suspected.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C24. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
June 07, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

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

Analysis Report

June 07, 2018

FOR: Attn: Ms.Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/24/18	10:40
Location Code:	TIGHE-DAS	Received by:	LB	05/24/18	17:59
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA58993
Phoenix ID: CA58996

Project ID: ROCKVILLE MGP
Client ID: MW-7S

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Arsenic	< 0.004	0.004	mg/L	1	05/29/18	MA	SW6010C
Barium	0.329	0.002	mg/L	1	05/29/18	MA	SW6010C
Beryllium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Cadmium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Chromium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Copper	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Mercury	0.0002	0.0002	mg/L	1	05/30/18	RS	SW7470A
Nickel	0.002	0.001	mg/L	1	05/29/18	MA	SW6010C
Lead	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Antimony	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Selenium	< 0.010	0.010	mg/L	1	05/29/18	MA	SW6010C
Thallium	< 0.0005	0.0005	mg/L	5	05/29/18	CPP	SW6020B
Vanadium	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Zinc	0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Total Cyanide	< 0.010	0.010	mg/L	1	05/31/18	O/GD	SW9010C/SW9012B
Extraction of CT ETPH	Completed				05/30/18	P/D	SW3510C/SW3520C
Mercury Digestion	Completed				05/30/18	I/I	SW7470A
Semi-Volatile Extraction	Completed				05/29/18	P/R/D	SW3520C
Total Metals Digestion	Completed				05/26/18	AG	
Total Metals Digestion MS	Completed				05/25/18	AG	
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	1.0	0.066	mg/L	1	05/31/18	JRB	CTETPH 8015D
Identification	**		mg/L	1	05/31/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	63		%	1	05/31/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-7S

Phoenix I.D.: CA58996

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2,4-Trimethylbenzene	27	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	05/26/18	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	05/26/18	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,3,5-Trimethylbenzene	1.5	1.0	ug/L	1	05/26/18	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
Acetone	ND	25	ug/L	1	05/26/18	MH	SW8260C
Acrylonitrile	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
Benzene	2.0	0.70	ug/L	1	05/26/18	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	05/26/18	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	05/26/18	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Ethylbenzene	11	1.0	ug/L	1	05/26/18	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	05/26/18	MH	SW8260C
Isopropylbenzene	11	1.0	ug/L	1	05/26/18	MH	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-7S

Phoenix I.D.: CA58996

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	8.5	1.0	ug/L	1	05/26/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Naphthalene	160	20	ug/L	20	05/27/18	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
n-Propylbenzene	1.6	1.0	ug/L	1	05/26/18	MH	SW8260C
o-Xylene	46	20	ug/L	20	05/27/18	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Styrene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	05/26/18	MH	SW8260C
Toluene	1.8	1.0	ug/L	1	05/26/18	MH	SW8260C
Total Xylenes	54.5	1.0	ug/L	1	05/26/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	05/26/18	MH	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	05/26/18	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	05/26/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	96		%	1	05/26/18	MH	70 - 130 %
% Bromofluorobenzene	91		%	1	05/26/18	MH	70 - 130 %
% Dibromofluoromethane	92		%	1	05/26/18	MH	70 - 130 %
% Toluene-d8	93		%	1	05/26/18	MH	70 - 130 %
Semivolatiles							
1,2,4-Trichlorobenzene	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
1,2-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	DD	SW8270D
1,2-Diphenylhydrazine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
1,3-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	DD	SW8270D
1,4-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	DD	SW8270D
2,4,5-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4,6-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4-Dichlorophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4-Dimethylphenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4-Dinitrophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
2,6-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
2-Chloronaphthalene	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
2-Chlorophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2-Methylphenol (o-cresol)	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2-Nitroaniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
2-Nitrophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	9.4	ug/L	1	05/31/18	DD	SW8270D
3,3'-Dichlorobenzidine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
3-Nitroaniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D

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Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4,6-Dinitro-2-methylphenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
4-Bromophenyl phenyl ether	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
4-Chloro-3-methylphenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
4-Chloroaniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
4-Chlorophenyl phenyl ether	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
4-Nitroaniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
4-Nitrophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
Acenaphthene	21	4.7	ug/L	1	05/31/18	DD	SW8270D
Acetophenone	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Aniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Benzidine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Benzoic acid	ND	47	ug/L	1	05/31/18	DD	SW8270D
Benzyl butyl phthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Bis(2-chloroethoxy)methane	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Bis(2-chloroethyl)ether	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
Bis(2-chloroisopropyl)ether	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Carbazole	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Diethyl phthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Dimethylphthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Di-n-butylphthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Di-n-octylphthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Isophorone	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Naphthalene	130	47	ug/L	10	06/01/18	DD	SW8270D
N-Nitrosodimethylamine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
N-Nitrosodi-n-propylamine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
N-Nitrosodiphenylamine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Phenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	87		%	1	05/31/18	DD	15 - 110 %
% 2-Fluorobiphenyl	69		%	1	05/31/18	DD	30 - 130 %
% 2-Fluorophenol	49		%	1	05/31/18	DD	15 - 110 %
% Nitrobenzene-d5	65		%	1	05/31/18	DD	30 - 130 %
% Phenol-d5	52		%	1	05/31/18	DD	15 - 110 %
% Terphenyl-d14	75		%	1	05/31/18	DD	30 - 130 %
Semivolatiles (SIM)							
1,2,4,5-Tetrachlorobenzene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
2-Methylnaphthalene	ND	0.94	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthylene	2.4	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Anthracene	0.57	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benz(a)anthracene	0.19	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(a)pyrene	0.22	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(b)fluoranthene	0.11	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.19	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(k)fluoranthene	0.13	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Bis(2-ethylhexyl)phthalate	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Chrysene	0.22	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenz(a,h)anthracene	0.03	0.01	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenzofuran	0.87	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluoranthene	0.41	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-7S

Phoenix I.D.: CA58996

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Fluorene	3.6	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorobenzene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorobutadiene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorocyclopentadiene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachloroethane	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	0.11	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Nitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachloronitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachlorophenol	ND	0.75	ug/L	1	05/31/18	DD	SW8270D (SIM)
Phenanthrene	1.8	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyrene	0.67	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyridine	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
QA/QC Surrogates							
% 2,4,6-Tribromophenol	110		%	1	05/31/18	DD	15 - 110 %
% 2-Fluorobiphenyl	68		%	1	05/31/18	DD	30 - 130 %
% 2-Fluorophenol	61		%	1	05/31/18	DD	15 - 110 %
% Nitrobenzene-d5	69		%	1	05/31/18	DD	30 - 130 %
% Phenol-d5	62		%	1	05/31/18	DD	15 - 110 %
% Terphenyl-d14	69		%	1	05/31/18	DD	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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C24. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
June 07, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

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

Analysis Report

June 07, 2018

FOR: Attn: Ms.Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/24/18	15:35
Location Code:	TIGHE-DAS	Received by:	LB	05/24/18	17:59
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA58993
Phoenix ID: CA58997

Project ID: ROCKVILLE MGP
Client ID: MW-9S

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Arsenic	< 0.004	0.004	mg/L	1	05/29/18	MA	SW6010C
Barium	0.177	0.002	mg/L	1	05/29/18	MA	SW6010C
Beryllium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Cadmium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Chromium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Copper	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Mercury	< 0.0002	0.0002	mg/L	1	05/30/18	RS	SW7470A
Nickel	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Lead	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Antimony	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Selenium	< 0.010	0.010	mg/L	1	05/29/18	MA	SW6010C
Thallium	< 0.0005	0.0005	mg/L	5	05/29/18	CPP	SW6020B
Vanadium	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Zinc	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Total Cyanide	0.062	0.010	mg/L	1	05/31/18	O/GD	SW9010C/SW9012B
Extraction of CT ETPH	Completed				05/30/18	P/D	SW3510C/SW3520C
Mercury Digestion	Completed				05/30/18	I/I	SW7470A
Semi-Volatile Extraction	Completed				05/29/18	P/R/D	SW3520C
Total Metals Digestion	Completed				05/26/18	AG	
Total Metals Digestion MS	Completed				05/25/18	AG	
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	4.5	0.066	mg/L	1	05/31/18	JRB	CTETPH 8015D
Identification	**		mg/L	1	05/31/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	71		%	1	05/31/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-9S

Phoenix I.D.: CA58997

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.5	ug/L	10	05/29/18	HM	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	05/29/18	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	10	05/29/18	HM	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	05/29/18	HM	SW8260C
1,1-Dichloroethane	ND	10	ug/L	10	05/29/18	HM	SW8260C
1,1-Dichloroethene	ND	2.5	ug/L	10	05/29/18	HM	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	05/29/18	HM	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	10	05/29/18	HM	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	10	05/29/18	HM	SW8260C
1,2,4-Trichlorobenzene	ND	9.6	ug/L	10	05/29/18	HM	SW8260C
1,2,4-Trimethylbenzene	180	10	ug/L	10	05/29/18	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	05/29/18	HM	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	10	05/29/18	HM	SW8260C
1,2-Dichlorobenzene	ND	10	ug/L	10	05/29/18	HM	SW8260C
1,2-Dichloroethane	ND	2.5	ug/L	10	05/29/18	HM	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	10	05/29/18	HM	SW8260C
1,3,5-Trimethylbenzene	62	10	ug/L	10	05/29/18	HM	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	05/29/18	HM	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	05/29/18	HM	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	10	05/29/18	HM	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	05/29/18	HM	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	05/29/18	HM	SW8260C
2-Hexanone	ND	35	ug/L	10	05/29/18	HM	SW8260C
2-Isopropyltoluene	ND	10	ug/L	10	05/29/18	HM	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	05/29/18	HM	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	05/29/18	HM	SW8260C
Acetone	ND	250	ug/L	10	05/29/18	HM	SW8260C
Acrylonitrile	ND	2.5	ug/L	10	05/29/18	HM	SW8260C
Benzene	31	7.0	ug/L	10	05/29/18	HM	SW8260C
Bromobenzene	ND	10	ug/L	10	05/29/18	HM	SW8260C
Bromochloromethane	ND	10	ug/L	10	05/29/18	HM	SW8260C
Bromodichloromethane	ND	2.5	ug/L	10	05/29/18	HM	SW8260C
Bromoform	ND	4.0	ug/L	10	05/29/18	HM	SW8260C
Bromomethane	ND	3.5	ug/L	10	05/29/18	HM	SW8260C
Carbon Disulfide	ND	40	ug/L	10	05/29/18	HM	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	10	05/29/18	HM	SW8260C
Chlorobenzene	ND	10	ug/L	10	05/29/18	HM	SW8260C
Chloroethane	ND	7.4	ug/L	10	05/29/18	HM	SW8260C
Chloroform	ND	6.0	ug/L	10	05/29/18	HM	SW8260C
Chloromethane	ND	10	ug/L	10	05/29/18	HM	SW8260C
cis-1,2-Dichloroethene	ND	10	ug/L	10	05/29/18	HM	SW8260C
cis-1,3-Dichloropropene	ND	4.0	ug/L	10	05/29/18	HM	SW8260C
Dibromochloromethane	ND	2.5	ug/L	10	05/29/18	HM	SW8260C
Dibromomethane	ND	10	ug/L	10	05/29/18	HM	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	05/29/18	HM	SW8260C
Ethylbenzene	500	50	ug/L	50	05/29/18	HM	SW8260C
Hexachlorobutadiene	ND	4.0	ug/L	10	05/29/18	HM	SW8260C
Isopropylbenzene	36	10	ug/L	10	05/29/18	HM	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-9S

Phoenix I.D.: CA58997

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	130	10	ug/L	10	05/29/18	HM	SW8260C
Methyl ethyl ketone	ND	50	ug/L	10	05/29/18	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	05/29/18	HM	SW8260C
Methylene chloride	ND	10	ug/L	10	05/29/18	HM	SW8260C
Naphthalene	1600	100	ug/L	100	05/30/18	HM	SW8260C
n-Butylbenzene	ND	10	ug/L	10	05/29/18	HM	SW8260C
n-Propylbenzene	15	10	ug/L	10	05/29/18	HM	SW8260C
o-Xylene	240	10	ug/L	10	05/29/18	HM	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	05/29/18	HM	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	05/29/18	HM	SW8260C
Styrene	ND	10	ug/L	10	05/29/18	HM	SW8260C
tert-Butylbenzene	ND	10	ug/L	10	05/29/18	HM	SW8260C
Tetrachloroethene	ND	5.0	ug/L	10	05/29/18	HM	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	05/29/18	HM	SW8260C
Toluene	27	10	ug/L	10	05/29/18	HM	SW8260C
Total Xylenes	370	10	ug/L	10	05/29/18	HM	SW8260C
trans-1,2-Dichloroethene	ND	10	ug/L	10	05/29/18	HM	SW8260C
trans-1,3-Dichloropropene	ND	4.0	ug/L	10	05/29/18	HM	SW8260C
trans-1,4-dichloro-2-butene	ND	50	ug/L	10	05/29/18	HM	SW8260C
Trichloroethene	ND	5.0	ug/L	10	05/29/18	HM	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	05/29/18	HM	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	05/29/18	HM	SW8260C
Vinyl chloride	ND	2.5	ug/L	10	05/29/18	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	10	05/29/18	HM	70 - 130 %
% Bromofluorobenzene	95		%	10	05/29/18	HM	70 - 130 %
% Dibromofluoromethane	101		%	10	05/29/18	HM	70 - 130 %
% Toluene-d8	98		%	10	05/29/18	HM	70 - 130 %
Semivolatiles							
1,2,4,5-Tetrachlorobenzene	ND	17	ug/L	10	05/31/18	DD	SW8270D
1,2,4-Trichlorobenzene	ND	14	ug/L	10	05/31/18	DD	SW8270D
1,2-Dichlorobenzene	ND	47	ug/L	10	05/31/18	DD	SW8270D
1,2-Diphenylhydrazine	ND	15	ug/L	10	05/31/18	DD	SW8270D
1,3-Dichlorobenzene	ND	47	ug/L	10	05/31/18	DD	SW8270D
1,4-Dichlorobenzene	ND	47	ug/L	10	05/31/18	DD	SW8270D
2,4,5-Trichlorophenol	ND	28	ug/L	10	05/31/18	DD	SW8270D
2,4,6-Trichlorophenol	ND	8.5	ug/L	10	05/31/18	DD	SW8270D
2,4-Dichlorophenol	ND	20	ug/L	10	05/31/18	DD	SW8270D
2,4-Dimethylphenol	ND	47	ug/L	10	05/31/18	DD	SW8270D
2,4-Dinitrophenol	ND	14	ug/L	10	05/31/18	DD	SW8270D
2,4-Dinitrotoluene	ND	18	ug/L	10	05/31/18	DD	SW8270D
2,6-Dinitrotoluene	ND	15	ug/L	10	05/31/18	DD	SW8270D
2-Chloronaphthalene	ND	47	ug/L	10	05/31/18	DD	SW8270D
2-Chlorophenol	ND	36	ug/L	10	05/31/18	DD	SW8270D
2-Methylnaphthalene	160	47	ug/L	10	05/31/18	DD	SW8270D
2-Methylphenol (o-cresol)	ND	47	ug/L	10	05/31/18	DD	SW8270D
2-Nitroaniline	ND	33	ug/L	10	05/31/18	DD	SW8270D
2-Nitrophenol	ND	47	ug/L	10	05/31/18	DD	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	47	ug/L	10	05/31/18	DD	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-9S

Phoenix I.D.: CA58997

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	22	ug/L	10	05/31/18	DD	SW8270D
3-Nitroaniline	ND	19	ug/L	10	05/31/18	DD	SW8270D
4,6-Dinitro-2-methylphenol	ND	10	ug/L	10	05/31/18	DD	SW8270D
4-Bromophenyl phenyl ether	ND	47	ug/L	10	05/31/18	DD	SW8270D
4-Chloro-3-methylphenol	ND	47	ug/L	10	05/31/18	DD	SW8270D
4-Chloroaniline	ND	19	ug/L	10	05/31/18	DD	SW8270D
4-Chlorophenyl phenyl ether	ND	47	ug/L	10	05/31/18	DD	SW8270D
4-Nitroaniline	ND	16	ug/L	10	05/31/18	DD	SW8270D
4-Nitrophenol	ND	47	ug/L	10	05/31/18	DD	SW8270D
Acenaphthene	100	47	ug/L	10	05/31/18	DD	SW8270D
Acenaphthylene	ND	13	ug/L	10	05/31/18	DD	SW8270D
Acetophenone	ND	47	ug/L	10	05/31/18	DD	SW8270D
Aniline	ND	9.4	ug/L	10	05/31/18	DD	SW8270D
Anthracene	ND	47	ug/L	10	05/31/18	DD	SW8270D
Benz(a)anthracene	ND	16	ug/L	10	05/31/18	DD	SW8270D
Benzidine	ND	28	ug/L	10	05/31/18	DD	SW8270D
Benzo(a)pyrene	ND	15	ug/L	10	05/31/18	DD	SW8270D
Benzo(b)fluoranthene	ND	16	ug/L	10	05/31/18	DD	SW8270D
Benzo(ghi)perylene	ND	15	ug/L	10	05/31/18	DD	SW8270D
Benzo(k)fluoranthene	ND	16	ug/L	10	05/31/18	DD	SW8270D
Benzoic acid	ND	94	ug/L	10	05/31/18	DD	SW8270D
Benzyl butyl phthalate	ND	47	ug/L	10	05/31/18	DD	SW8270D
Bis(2-chloroethoxy)methane	ND	21	ug/L	10	05/31/18	DD	SW8270D
Bis(2-chloroethyl)ether	ND	13	ug/L	10	05/31/18	DD	SW8270D
Bis(2-chloroisopropyl)ether	ND	13	ug/L	10	05/31/18	DD	SW8270D
Bis(2-ethylhexyl)phthalate	ND	14	ug/L	10	05/31/18	DD	SW8270D
Carbazole	50	47	ug/L	10	05/31/18	DD	SW8270D
Chrysene	ND	16	ug/L	10	05/31/18	DD	SW8270D
Dibenz(a,h)anthracene	ND	15	ug/L	10	05/31/18	DD	SW8270D
Dibenzofuran	ND	47	ug/L	10	05/31/18	DD	SW8270D
Diethyl phthalate	ND	47	ug/L	10	05/31/18	DD	SW8270D
Dimethylphthalate	ND	47	ug/L	10	05/31/18	DD	SW8270D
Di-n-butylphthalate	ND	47	ug/L	10	05/31/18	DD	SW8270D
Di-n-octylphthalate	ND	47	ug/L	10	05/31/18	DD	SW8270D
Fluoranthene	ND	47	ug/L	10	05/31/18	DD	SW8270D
Fluorene	ND	47	ug/L	10	05/31/18	DD	SW8270D
Hexachlorobenzene	ND	47	ug/L	10	05/31/18	DD	SW8270D
Hexachlorobutadiene	ND	17	ug/L	10	05/31/18	DD	SW8270D
Hexachlorocyclopentadiene	ND	14	ug/L	10	05/31/18	DD	SW8270D
Hexachloroethane	ND	14	ug/L	10	05/31/18	DD	SW8270D
Indeno(1,2,3-cd)pyrene	ND	16	ug/L	10	05/31/18	DD	SW8270D
Isophorone	ND	37	ug/L	10	05/31/18	DD	SW8270D
Naphthalene	1200	470	ug/L	100	06/01/18	DD	SW8270D
Nitrobenzene	ND	16	ug/L	10	05/31/18	DD	SW8270D
N-Nitrosodimethylamine	ND	13	ug/L	10	05/31/18	DD	SW8270D
N-Nitrosodi-n-propylamine	ND	15	ug/L	10	05/31/18	DD	SW8270D
N-Nitrosodiphenylamine	ND	18	ug/L	10	05/31/18	DD	SW8270D
Pentachloronitrobenzene	ND	17	ug/L	10	05/31/18	DD	SW8270D
Pentachlorophenol	ND	8.5	ug/L	10	05/31/18	DD	SW8270D

Project ID: ROCKVILLE MGP
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Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	47	ug/L	10	05/31/18	DD	SW8270D
Phenol	ND	47	ug/L	10	05/31/18	DD	SW8270D
Pyrene	ND	47	ug/L	10	05/31/18	DD	SW8270D
Pyridine	ND	12	ug/L	10	05/31/18	DD	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	Diluted Out		%	10	05/31/18	DD	15 - 110 %
% 2-Fluorobiphenyl	Diluted Out		%	10	05/31/18	DD	30 - 130 %
% 2-Fluorophenol	Diluted Out		%	10	05/31/18	DD	15 - 110 %
% Nitrobenzene-d5	Diluted Out		%	10	05/31/18	DD	30 - 130 %
% Phenol-d5	Diluted Out		%	10	05/31/18	DD	15 - 110 %
% Terphenyl-d14	Diluted Out		%	10	05/31/18	DD	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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C26. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

Semi-Volatile Comment:
Due to a matrix interference and/or the presence of a large amount of non-target material in the sample, a dilution was required resulting in an elevated RL for the semivolatile analysis.

Semi-Volatile Comment:
The client requested semivolatile SIM analysis for some compounds. Due to sample matrix, the sample had to be run full scan and could not be evaluated to the requested detection levels.

Semi-Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
June 07, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

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

Analysis Report

June 07, 2018

FOR: Attn: Ms.Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/24/18	12:25
Location Code:	TIGHE-DAS	Received by:	LB	05/24/18	17:59
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA58993
Phoenix ID: CA58998

Project ID: ROCKVILLE MGP
Client ID: MW-19S

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Arsenic	< 0.004	0.004	mg/L	1	05/29/18	MA	SW6010C
Barium	0.069	0.002	mg/L	1	05/29/18	MA	SW6010C
Beryllium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Cadmium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Chromium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Copper	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Mercury	< 0.0002	0.0002	mg/L	1	05/30/18	RS	SW7470A
Nickel	0.002	0.001	mg/L	1	05/29/18	MA	SW6010C
Lead	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Antimony	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Selenium	< 0.010	0.010	mg/L	1	05/29/18	MA	SW6010C
Thallium	< 0.0005	0.0005	mg/L	5	05/29/18	CPP	SW6020B
Vanadium	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Zinc	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Total Cyanide	< 0.010	0.010	mg/L	1	05/31/18	O/GD	SW9010C/SW9012B
Extraction of CT ETPH	Completed				05/30/18	P/D	SW3510C/SW3520C
Mercury Digestion	Completed				05/30/18	I/I	SW7470A
Semi-Volatile Extraction	Completed				05/29/18	P/R/D	SW3520C
Total Metals Digestion	Completed				05/26/18	AG	
Total Metals Digestion MS	Completed				05/25/18	AG	
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	0.067	mg/L	1	05/31/18	JRB	CTETPH 8015D
Identification	ND		mg/L	1	05/31/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	68		%	1	05/31/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-19S

Phoenix I.D.: CA58998

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	05/30/18	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	05/30/18	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	05/30/18	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	05/30/18	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	05/30/18	HM	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	05/30/18	HM	SW8260C
Acetone	ND	25	ug/L	1	05/30/18	HM	SW8260C
Acrylonitrile	ND	0.50	ug/L	1	05/30/18	HM	SW8260C
Benzene	ND	0.70	ug/L	1	05/30/18	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	05/30/18	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	05/30/18	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	05/30/18	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	05/30/18	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	05/30/18	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-19S

Phoenix I.D.: CA58998

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	05/30/18	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Styrene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	05/30/18	HM	SW8260C
Toluene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Total Xylenes	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	05/30/18	HM	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	05/30/18	HM	SW8260C
Trichloroethene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	05/30/18	HM	70 - 130 %
% Bromofluorobenzene	95		%	1	05/30/18	HM	70 - 130 %
% Dibromofluoromethane	102		%	1	05/30/18	HM	70 - 130 %
% Toluene-d8	98		%	1	05/30/18	HM	70 - 130 %
Semivolatiles							
1,2,4-Trichlorobenzene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
1,2-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	KCA	SW8270D
1,2-Diphenylhydrazine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
1,3-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	KCA	SW8270D
1,4-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	KCA	SW8270D
2,4,5-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4,6-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dichlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dimethylphenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dinitrophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2,6-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2-Chloronaphthalene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2-Chlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2-Nitroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2-Nitrophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	9.4	ug/L	1	05/31/18	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
3-Nitroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-19S

Phoenix I.D.: CA58998

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4,6-Dinitro-2-methylphenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
4-Chloro-3-methylphenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
4-Chloroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
4-Nitroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
4-Nitrophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
Acetophenone	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Aniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Benzidine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Benzoic acid	ND	47	ug/L	1	05/31/18	KCA	SW8270D
Benzyl butyl phthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Carbazole	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Diethyl phthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Dimethylphthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Di-n-butylphthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Di-n-octylphthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Isophorone	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
N-Nitrosodimethylamine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
N-Nitrosodiphenylamine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Phenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	58		%	1	05/31/18	KCA	15 - 110 %
% 2-Fluorobiphenyl	68		%	1	05/31/18	KCA	30 - 130 %
% 2-Fluorophenol	45		%	1	05/31/18	KCA	15 - 110 %
% Nitrobenzene-d5	63		%	1	05/31/18	KCA	30 - 130 %
% Phenol-d5	51		%	1	05/31/18	KCA	15 - 110 %
% Terphenyl-d14	73		%	1	05/31/18	KCA	30 - 130 %
Semivolatiles (SIM)							
1,2,4,5-Tetrachlorobenzene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
2-Methylnaphthalene	ND	0.94	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthylene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Anthracene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benz(a)anthracene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(a)pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.19	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Bis(2-ethylhexyl)phthalate	0.65	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.01	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenzofuran	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-19S

Phoenix I.D.: CA58998

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Hexachlorobenzene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorobutadiene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorocyclopentadiene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachloroethane	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Naphthalene	0.14	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Nitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachloronitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachlorophenol	ND	0.75	ug/L	1	05/31/18	DD	SW8270D (SIM)
Phenanthrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyridine	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
QA/QC Surrogates							
% 2,4,6-Tribromophenol	91		%	1	05/31/18	DD	15 - 110 %
% 2-Fluorobiphenyl	53		%	1	05/31/18	DD	30 - 130 %
% 2-Fluorophenol	48		%	1	05/31/18	DD	15 - 110 %
% Nitrobenzene-d5	67		%	1	05/31/18	DD	30 - 130 %
% Phenol-d5	57		%	1	05/31/18	DD	15 - 110 %
% Terphenyl-d14	63		%	1	05/31/18	DD	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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
June 07, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

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

Analysis Report

June 07, 2018

FOR: Attn: Ms.Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/24/18	13:50
Location Code:	TIGHE-DAS	Received by:	LB	05/24/18	17:59
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA58993
Phoenix ID: CA58999

Project ID: ROCKVILLE MGP
Client ID: MW-21S

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Arsenic	< 0.004	0.004	mg/L	1	05/29/18	MA	SW6010C
Barium	0.223	0.002	mg/L	1	05/29/18	MA	SW6010C
Beryllium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Cadmium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Chromium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Copper	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Mercury	< 0.0002	0.0002	mg/L	1	05/30/18	RS	SW7470A
Nickel	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Lead	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Antimony	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Selenium	< 0.010	0.010	mg/L	1	05/29/18	MA	SW6010C
Thallium	< 0.0005	0.0005	mg/L	5	05/29/18	CPP	SW6020B
Vanadium	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Zinc	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Total Cyanide	< 0.010	0.010	mg/L	1	05/31/18	O/GD	SW9010C/SW9012B
Extraction of CT ETPH	Completed				05/30/18	P/D	SW3510C/SW3520C
Mercury Digestion	Completed				05/30/18	I/I	SW7470A
Semi-Volatile Extraction	Completed				05/29/18	P/R/D	SW3520C
Total Metals Digestion	Completed				05/26/18	AG	
Total Metals Digestion MS	Completed				05/25/18	AG	
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	0.066	mg/L	1	05/31/18	JRB	CTETPH 8015D
Identification	ND		mg/L	1	05/31/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	68		%	1	05/31/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-21S

Phoenix I.D.: CA58999

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	05/29/18	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	05/29/18	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
Acetone	ND	25	ug/L	1	05/29/18	MH	SW8260C
Acrylonitrile	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
Benzene	ND	0.70	ug/L	1	05/29/18	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	05/29/18	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	05/29/18	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-21S

Phoenix I.D.: CA58999

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Styrene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	05/29/18	MH	SW8260C
Toluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Total Xylenes	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	05/29/18	MH	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	05/29/18	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	05/29/18	MH	70 - 130 %
% Dibromofluoromethane	103		%	1	05/29/18	MH	70 - 130 %
% Toluene-d8	99		%	1	05/29/18	MH	70 - 130 %
Semivolatiles							
1,2,4-Trichlorobenzene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
1,2-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	KCA	SW8270D
1,2-Diphenylhydrazine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
1,3-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	KCA	SW8270D
1,4-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	KCA	SW8270D
2,4,5-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4,6-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dichlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dimethylphenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dinitrophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2,4-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2,6-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2-Chloronaphthalene	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2-Chlorophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
2-Nitroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
2-Nitrophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	9.4	ug/L	1	05/31/18	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
3-Nitroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-21S

Phoenix I.D.: CA58999

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4,6-Dinitro-2-methylphenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
4-Chloro-3-methylphenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
4-Chloroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
4-Nitroaniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
4-Nitrophenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
Acetophenone	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Aniline	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Benzidine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Benzoic acid	ND	47	ug/L	1	05/31/18	KCA	SW8270D
Benzyl butyl phthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Carbazole	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Diethyl phthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Dimethylphthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Di-n-butylphthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Di-n-octylphthalate	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Isophorone	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
N-Nitrosodimethylamine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
N-Nitrosodiphenylamine	ND	4.7	ug/L	1	05/31/18	KCA	SW8270D
Phenol	ND	0.94	ug/L	1	05/31/18	KCA	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	54		%	1	05/31/18	KCA	15 - 110 %
% 2-Fluorobiphenyl	69		%	1	05/31/18	KCA	30 - 130 %
% 2-Fluorophenol	43		%	1	05/31/18	KCA	15 - 110 %
% Nitrobenzene-d5	59		%	1	05/31/18	KCA	30 - 130 %
% Phenol-d5	44		%	1	05/31/18	KCA	15 - 110 %
% Terphenyl-d14	77		%	1	05/31/18	KCA	30 - 130 %
Semivolatiles (SIM)							
1,2,4,5-Tetrachlorobenzene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
2-Methylnaphthalene	ND	0.94	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthylene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Anthracene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benz(a)anthracene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(a)pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.19	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Bis(2-ethylhexyl)phthalate	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.01	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenzofuran	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-21S

Phoenix I.D.: CA58999

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Hexachlorobenzene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorobutadiene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorocyclopentadiene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachloroethane	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Naphthalene	0.40	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Nitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachloronitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachlorophenol	ND	0.75	ug/L	1	05/31/18	DD	SW8270D (SIM)
Phenanthrene	0.06	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyridine	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
QA/QC Surrogates							
% 2,4,6-Tribromophenol	84		%	1	05/31/18	DD	15 - 110 %
% 2-Fluorobiphenyl	57		%	1	05/31/18	DD	30 - 130 %
% 2-Fluorophenol	43		%	1	05/31/18	DD	15 - 110 %
% Nitrobenzene-d5	61		%	1	05/31/18	DD	30 - 130 %
% Phenol-d5	48		%	1	05/31/18	DD	15 - 110 %
% Terphenyl-d14	63		%	1	05/31/18	DD	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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
June 07, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

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

Analysis Report

June 07, 2018

FOR: Attn: Ms.Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/24/18	15:47
Location Code:	TIGHE-DAS	Received by:	LB	05/24/18	17:59
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA58993
Phoenix ID: CA59000

Project ID: ROCKVILLE MGP
Client ID: MW-10M

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Arsenic	< 0.004	0.004	mg/L	1	05/29/18	MA	SW6010C
Barium	0.110	0.002	mg/L	1	05/29/18	MA	SW6010C
Beryllium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Cadmium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Chromium	0.003	0.001	mg/L	1	05/29/18	MA	SW6010C
Copper	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Mercury	< 0.0002	0.0002	mg/L	1	05/30/18	RS	SW7470A
Nickel	0.013	0.001	mg/L	1	05/29/18	MA	SW6010C
Lead	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Antimony	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Selenium	< 0.010	0.010	mg/L	1	05/29/18	MA	SW6010C
Thallium	< 0.0005	0.0005	mg/L	5	05/29/18	CPP	SW6020B
Vanadium	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Zinc	0.010	0.002	mg/L	1	05/29/18	MA	SW6010C
Total Cyanide	< 0.010	0.010	mg/L	1	05/31/18	O/GD	SW9010C/SW9012B
Extraction of CT ETPH	Completed				05/30/18	P/D	SW3510C/SW3520C
Mercury Digestion	Completed				05/30/18	I/I	SW7470A
Semi-Volatile Extraction	Completed				05/29/18	P/R/D	SW3520C
Total Metals Digestion	Completed				05/26/18	AG	
Total Metals Digestion MS	Completed				05/25/18	AG	
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	0.066	mg/L	1	05/31/18	JRB	CTETPH 8015D
Identification	ND		mg/L	1	05/31/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	70		%	1	05/31/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-10M

Phoenix I.D.: CA59000

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	05/29/18	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	05/29/18	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
Acetone	ND	25	ug/L	1	05/29/18	MH	SW8260C
Acrylonitrile	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
Benzene	ND	0.70	ug/L	1	05/29/18	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	05/29/18	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	05/29/18	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-10M

Phoenix I.D.: CA59000

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Naphthalene	2.2	1.0	ug/L	1	05/29/18	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Styrene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	05/29/18	MH	SW8260C
Toluene	1.4	1.0	ug/L	1	05/29/18	MH	SW8260C
Total Xylenes	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	05/29/18	MH	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	05/29/18	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	05/29/18	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	05/29/18	MH	70 - 130 %
% Toluene-d8	99		%	1	05/29/18	MH	70 - 130 %
Semivolatiles							
1,2,4-Trichlorobenzene	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
1,2-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	DD	SW8270D
1,2-Diphenylhydrazine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
1,3-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	DD	SW8270D
1,4-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	DD	SW8270D
2,4,5-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4,6-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4-Dichlorophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4-Dimethylphenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4-Dinitrophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
2,6-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
2-Chloronaphthalene	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
2-Chlorophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2-Methylphenol (o-cresol)	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2-Nitroaniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
2-Nitrophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	9.4	ug/L	1	05/31/18	DD	SW8270D
3,3'-Dichlorobenzidine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
3-Nitroaniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-10M

Phoenix I.D.: CA59000

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4,6-Dinitro-2-methylphenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
4-Bromophenyl phenyl ether	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
4-Chloro-3-methylphenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
4-Chloroaniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
4-Chlorophenyl phenyl ether	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
4-Nitroaniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
4-Nitrophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
Acetophenone	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Aniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Benzidine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Benzoic acid	ND	47	ug/L	1	05/31/18	DD	SW8270D
Benzyl butyl phthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Bis(2-chloroethoxy)methane	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Bis(2-chloroethyl)ether	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
Bis(2-chloroisopropyl)ether	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Carbazole	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Diethyl phthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Dimethylphthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Di-n-butylphthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Di-n-octylphthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Isophorone	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
N-Nitrosodimethylamine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
N-Nitrosodi-n-propylamine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
N-Nitrosodiphenylamine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Phenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	74		%	1	05/31/18	DD	15 - 110 %
% 2-Fluorobiphenyl	77		%	1	05/31/18	DD	30 - 130 %
% 2-Fluorophenol	47		%	1	05/31/18	DD	15 - 110 %
% Nitrobenzene-d5	61		%	1	05/31/18	DD	30 - 130 %
% Phenol-d5	53		%	1	05/31/18	DD	15 - 110 %
% Terphenyl-d14	89		%	1	05/31/18	DD	30 - 130 %
Semivolatiles (SIM)							
1,2,4,5-Tetrachlorobenzene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
2-Methylnaphthalene	ND	0.94	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthylene	0.10	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Anthracene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benz(a)anthracene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(a)pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.19	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Bis(2-ethylhexyl)phthalate	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Chrysene	0.06	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.01	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenzofuran	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluoranthene	0.26	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-10M

Phoenix I.D.: CA59000

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Hexachlorobenzene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorobutadiene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorocyclopentadiene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachloroethane	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Naphthalene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Nitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachloronitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachlorophenol	ND	0.75	ug/L	1	05/31/18	DD	SW8270D (SIM)
Phenanthrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyrene	0.25	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyridine	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
QA/QC Surrogates							
% 2,4,6-Tribromophenol	104		%	1	05/31/18	DD	15 - 110 %
% 2-Fluorobiphenyl	66		%	1	05/31/18	DD	30 - 130 %
% 2-Fluorophenol	53		%	1	05/31/18	DD	15 - 110 %
% Nitrobenzene-d5	73		%	1	05/31/18	DD	30 - 130 %
% Phenol-d5	62		%	1	05/31/18	DD	15 - 110 %
% Terphenyl-d14	70		%	1	05/31/18	DD	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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
June 07, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

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

Analysis Report

June 07, 2018

FOR: Attn: Ms.Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/24/18	14:04
Location Code:	TIGHE-DAS	Received by:	LB	05/24/18	17:59
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA58993
Phoenix ID: CA59001

Project ID: ROCKVILLE MGP
Client ID: MW-14D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Silver	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C	
Arsenic	< 0.004	0.004	mg/L	1	05/29/18	MA	SW6010C	
Barium	0.012	0.002	mg/L	1	05/29/18	MA	SW6010C	
Beryllium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C	
Cadmium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C	
Chromium	0.037	0.001	mg/L	1	05/29/18	MA	SW6010C	
Copper	0.016	0.005	mg/L	1	05/29/18	MA	SW6010C	
Mercury	< 0.0002	0.0002	mg/L	1	05/30/18	RS	SW7470A	
Nickel	0.060	0.001	mg/L	1	05/29/18	MA	SW6010C	
Lead	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C	
Antimony	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C	
Selenium	< 0.010	0.010	mg/L	1	05/29/18	MA	SW6010C	
Thallium	< 0.0005	0.0005	mg/L	5	05/29/18	CPP	SW6020B	
Vanadium	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C	
Zinc	0.014	0.002	mg/L	1	05/29/18	MA	SW6010C	
Total Cyanide	0.069	0.010	mg/L	1	05/31/18	O/GD	SW9010C/SW9012B	
Extraction of CT ETPH	Completed				05/31/18	P/R	SW3510C/SW3520C	
Mercury Digestion	Completed				05/30/18	I/I	SW7470A	
Semi-Volatile Extraction	Completed				05/29/18	P/R/D	SW3520C	
Total Metals Digestion	Completed				05/26/18	AG		
Total Metals Digestion MS	Completed				05/25/18	AG		
TPH by GC (Extractable Products)								
Ext. Petroleum H.C. (C9-C36)	0.16	0.066	mg/L	1	06/04/18	JRB	CTETPH 8015D	
Identification	**		mg/L	1	06/04/18	JRB	CTETPH 8015D	
QA/QC Surrogates								
% n-Pentacosane	31		%	1	06/04/18	JRB	50 - 150 %	3

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-14D

Phoenix I.D.: CA59001

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	05/27/18	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,2,4-Trimethylbenzene	3.1	1.0	ug/L	1	05/27/18	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	05/27/18	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	05/27/18	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	05/27/18	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	05/27/18	MH	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	05/27/18	MH	SW8260C
Acetone	ND	25	ug/L	1	05/27/18	MH	SW8260C
Acrylonitrile	ND	0.50	ug/L	1	05/27/18	MH	SW8260C
Benzene	53	7.0	ug/L	10	05/29/18	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	05/27/18	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	05/27/18	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	05/27/18	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	05/27/18	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Ethylbenzene	21	1.0	ug/L	1	05/27/18	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	05/27/18	MH	SW8260C
Isopropylbenzene	1.6	1.0	ug/L	1	05/27/18	MH	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-14D

Phoenix I.D.: CA59001

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	6.5	1.0	ug/L	1	05/27/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	05/27/18	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Naphthalene	97	10	ug/L	10	05/29/18	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
o-Xylene	11	1.0	ug/L	1	05/27/18	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Styrene	2.0	1.0	ug/L	1	05/27/18	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	05/27/18	MH	SW8260C
Toluene	33	10	ug/L	10	05/29/18	MH	SW8260C
Total Xylenes	17.5	1.0	ug/L	1	05/27/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	05/27/18	MH	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	05/27/18	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	05/27/18	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	05/27/18	MH	70 - 130 %
% Dibromofluoromethane	106		%	1	05/27/18	MH	70 - 130 %
% Toluene-d8	97		%	1	05/27/18	MH	70 - 130 %
Semivolatiles							
1,2,4-Trichlorobenzene	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
1,2-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	DD	SW8270D
1,2-Diphenylhydrazine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
1,3-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	DD	SW8270D
1,4-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	DD	SW8270D
2,4,5-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4,6-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4-Dichlorophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4-Dimethylphenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4-Dinitrophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
2,6-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
2-Chloronaphthalene	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
2-Chlorophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2-Methylphenol (o-cresol)	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2-Nitroaniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
2-Nitrophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	9.4	ug/L	1	05/31/18	DD	SW8270D
3,3'-Dichlorobenzidine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
3-Nitroaniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-14D

Phoenix I.D.: CA59001

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4,6-Dinitro-2-methylphenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
4-Bromophenyl phenyl ether	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
4-Chloro-3-methylphenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
4-Chloroaniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
4-Chlorophenyl phenyl ether	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
4-Nitroaniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
4-Nitrophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
Acetophenone	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Aniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Benzidine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Benzoic acid	ND	47	ug/L	1	05/31/18	DD	SW8270D
Benzyl butyl phthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Bis(2-chloroethoxy)methane	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Bis(2-chloroethyl)ether	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
Bis(2-chloroisopropyl)ether	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Carbazole	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Diethyl phthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Dimethylphthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Di-n-butylphthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Di-n-octylphthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Isophorone	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Naphthalene	18	4.7	ug/L	1	05/31/18	DD	SW8270D
N-Nitrosodimethylamine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
N-Nitrosodi-n-propylamine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
N-Nitrosodiphenylamine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Phenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	84		%	1	05/31/18	DD	15 - 110 %
% 2-Fluorobiphenyl	79		%	1	05/31/18	DD	30 - 130 %
% 2-Fluorophenol	57		%	1	05/31/18	DD	15 - 110 %
% Nitrobenzene-d5	70		%	1	05/31/18	DD	30 - 130 %
% Phenol-d5	55		%	1	05/31/18	DD	15 - 110 %
% Terphenyl-d14	64		%	1	05/31/18	DD	30 - 130 %
Semivolatiles (SIM)							
1,2,4,5-Tetrachlorobenzene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
2-Methylnaphthalene	1.5	0.94	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthene	1.6	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthylene	0.09	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Anthracene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benz(a)anthracene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(a)pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.19	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Bis(2-ethylhexyl)phthalate	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.01	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenzofuran	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-14D

Phoenix I.D.: CA59001

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Fluorene	0.29	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorobenzene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorobutadiene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorocyclopentadiene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachloroethane	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Nitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachloronitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachlorophenol	ND	0.75	ug/L	1	05/31/18	DD	SW8270D (SIM)
Phenanthrene	0.11	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyridine	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
QA/QC Surrogates							
% 2,4,6-Tribromophenol	110		%	1	05/31/18	DD	15 - 110 %
% 2-Fluorobiphenyl	68		%	1	05/31/18	DD	30 - 130 %
% 2-Fluorophenol	61		%	1	05/31/18	DD	15 - 110 %
% Nitrobenzene-d5	83		%	1	05/31/18	DD	30 - 130 %
% Phenol-d5	70		%	1	05/31/18	DD	15 - 110 %
% Terphenyl-d14	63		%	1	05/31/18	DD	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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C24. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

TPH: Comment
The surrogate recovery was slightly below acceptance criteria for the ETPH analysis. The sample was re-analyzed with similar results. A slight negative bias cannot be ruled out.

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
June 07, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

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

Analysis Report

June 07, 2018

FOR: Attn: Ms.Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/24/18	12:44
Location Code:	TIGHE-DAS	Received by:	LB	05/24/18	17:59
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA58993
Phoenix ID: CA59002

Project ID: ROCKVILLE MGP
Client ID: MW-14S

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Arsenic	< 0.004	0.004	mg/L	1	05/29/18	MA	SW6010C
Barium	0.215	0.002	mg/L	1	05/29/18	MA	SW6010C
Beryllium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Cadmium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Chromium	0.013	0.001	mg/L	1	05/29/18	MA	SW6010C
Copper	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Mercury	< 0.0002	0.0002	mg/L	1	05/30/18	RS	SW7470A
Nickel	0.497	0.001	mg/L	1	05/29/18	MA	SW6010C
Lead	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Antimony	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Selenium	< 0.010	0.010	mg/L	1	05/29/18	MA	SW6010C
Thallium	< 0.0005	0.0005	mg/L	5	05/29/18	CPP	SW6020B
Vanadium	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Zinc	0.054	0.002	mg/L	1	05/29/18	MA	SW6010C
Total Cyanide	0.014	0.010	mg/L	1	05/31/18	O/GD	SW9010C/SW9012B
Extraction of CT ETPH	Completed				05/30/18	P/D	SW3510C/SW3520C
Mercury Digestion	Completed				05/30/18	I/I	SW7470A
Semi-Volatile Extraction	Completed				05/29/18	P/R/D	SW3520C
Total Metals Digestion	Completed				05/26/18	AG	
Total Metals Digestion MS	Completed				05/25/18	AG	
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	0.066	mg/L	1	05/31/18	JRB	CTETPH 8015D
Identification	ND		mg/L	1	05/31/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	59		%	1	05/31/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-14S

Phoenix I.D.: CA59002

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	05/29/18	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	05/29/18	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
Acetone	ND	25	ug/L	1	05/29/18	MH	SW8260C
Acrylonitrile	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
Benzene	ND	0.70	ug/L	1	05/29/18	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	05/29/18	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	05/29/18	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-14S

Phoenix I.D.: CA59002

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Styrene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	05/29/18	MH	SW8260C
Toluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Total Xylenes	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	05/29/18	MH	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	05/29/18	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	05/29/18	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	05/29/18	MH	70 - 130 %
% Toluene-d8	98		%	1	05/29/18	MH	70 - 130 %
Semivolatiles							
1,2,4-Trichlorobenzene	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
1,2-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	DD	SW8270D
1,2-Diphenylhydrazine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
1,3-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	DD	SW8270D
1,4-Dichlorobenzene	ND	2.4	ug/L	1	05/31/18	DD	SW8270D
2,4,5-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4,6-Trichlorophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4-Dichlorophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4-Dimethylphenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4-Dinitrophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2,4-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
2,6-Dinitrotoluene	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
2-Chloronaphthalene	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
2-Chlorophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2-Methylphenol (o-cresol)	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
2-Nitroaniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
2-Nitrophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	9.4	ug/L	1	05/31/18	DD	SW8270D
3,3'-Dichlorobenzidine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
3-Nitroaniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-14S

Phoenix I.D.: CA59002

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4,6-Dinitro-2-methylphenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
4-Bromophenyl phenyl ether	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
4-Chloro-3-methylphenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
4-Chloroaniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
4-Chlorophenyl phenyl ether	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
4-Nitroaniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
4-Nitrophenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
Acetophenone	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Aniline	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Benzidine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Benzoic acid	ND	47	ug/L	1	05/31/18	DD	SW8270D
Benzyl butyl phthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Bis(2-chloroethoxy)methane	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Bis(2-chloroethyl)ether	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
Bis(2-chloroisopropyl)ether	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Carbazole	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Diethyl phthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Dimethylphthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Di-n-butylphthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Di-n-octylphthalate	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Isophorone	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
N-Nitrosodimethylamine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
N-Nitrosodi-n-propylamine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
N-Nitrosodiphenylamine	ND	4.7	ug/L	1	05/31/18	DD	SW8270D
Phenol	ND	0.94	ug/L	1	05/31/18	DD	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	72		%	1	05/31/18	DD	15 - 110 %
% 2-Fluorobiphenyl	82		%	1	05/31/18	DD	30 - 130 %
% 2-Fluorophenol	60		%	1	05/31/18	DD	15 - 110 %
% Nitrobenzene-d5	76		%	1	05/31/18	DD	30 - 130 %
% Phenol-d5	62		%	1	05/31/18	DD	15 - 110 %
% Terphenyl-d14	91		%	1	05/31/18	DD	30 - 130 %
Semivolatiles (SIM)							
1,2,4,5-Tetrachlorobenzene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
2-Methylnaphthalene	ND	0.94	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthene	0.10	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthylene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Anthracene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benz(a)anthracene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(a)pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.19	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Bis(2-ethylhexyl)phthalate	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.01	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenzofuran	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-14S

Phoenix I.D.: CA59002

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Hexachlorobenzene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorobutadiene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorocyclopentadiene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachloroethane	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Naphthalene	0.57	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Nitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachloronitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachlorophenol	ND	0.75	ug/L	1	05/31/18	DD	SW8270D (SIM)
Phenanthrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyridine	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
QA/QC Surrogates							
% 2,4,6-Tribromophenol	108		%	1	05/31/18	DD	15 - 110 %
% 2-Fluorobiphenyl	72		%	1	05/31/18	DD	30 - 130 %
% 2-Fluorophenol	59		%	1	05/31/18	DD	15 - 110 %
% Nitrobenzene-d5	82		%	1	05/31/18	DD	30 - 130 %
% Phenol-d5	70		%	1	05/31/18	DD	15 - 110 %
% Terphenyl-d14	77		%	1	05/31/18	DD	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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
June 07, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

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

Analysis Report

June 07, 2018

FOR: Attn: Ms.Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/24/18	14:50
Location Code:	TIGHE-DAS	Received by:	LB	05/24/18	17:59
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA58993
Phoenix ID: CA59003

Project ID: ROCKVILLE MGP
Client ID: MW-9D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Arsenic	< 0.004	0.004	mg/L	1	05/29/18	MA	SW6010C
Barium	0.294	0.002	mg/L	1	05/29/18	MA	SW6010C
Beryllium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Cadmium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Chromium	0.674	0.001	mg/L	1	05/29/18	MA	SW6010C
Copper	0.022	0.005	mg/L	1	05/29/18	MA	SW6010C
Mercury	< 0.0002	0.0002	mg/L	1	05/30/18	RS	SW7470A
Nickel	0.372	0.001	mg/L	1	05/29/18	MA	SW6010C
Lead	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Antimony	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Selenium	< 0.010	0.010	mg/L	1	05/29/18	MA	SW6010C
Thallium	< 0.0005	0.0005	mg/L	5	05/29/18	CPP	SW6020B
Vanadium	0.004	0.002	mg/L	1	05/29/18	MA	SW6010C
Zinc	0.006	0.002	mg/L	1	05/29/18	MA	SW6010C
Total Cyanide	< 0.010	0.010	mg/L	1	05/31/18	O/GD	SW9010C/SW9012B
Extraction of CT ETPH	Completed				05/30/18	P/D	SW3510C/SW3520C
Mercury Digestion	Completed				05/30/18	I/I	SW7470A
Semi-Volatile Extraction	Completed				05/29/18	P/R/D	SW3520C
Total Metals Digestion	Completed				05/26/18	AG	
Total Metals Digestion MS	Completed				05/25/18	AG	
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	0.067	mg/L	1	05/31/18	JRB	CTETPH 8015D
Identification	ND		mg/L	1	05/31/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	70		%	1	05/31/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-9D

Phoenix I.D.: CA59003

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	05/30/18	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	05/30/18	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	05/30/18	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	05/30/18	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	05/30/18	HM	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	05/30/18	HM	SW8260C
Acetone	ND	25	ug/L	1	05/30/18	HM	SW8260C
Acrylonitrile	ND	0.50	ug/L	1	05/30/18	HM	SW8260C
Benzene	ND	0.70	ug/L	1	05/30/18	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	05/30/18	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	05/30/18	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	05/30/18	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	05/30/18	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	05/30/18	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-9D

Phoenix I.D.: CA59003

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	05/30/18	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Styrene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	05/30/18	HM	SW8260C
Toluene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Total Xylenes	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	05/30/18	HM	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	05/30/18	HM	SW8260C
Trichloroethene	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	05/30/18	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	05/30/18	HM	70 - 130 %
% Bromofluorobenzene	93		%	1	05/30/18	HM	70 - 130 %
% Dibromofluoromethane	100		%	1	05/30/18	HM	70 - 130 %
% Toluene-d8	98		%	1	05/30/18	HM	70 - 130 %
Semivolatiles							
1,2,4-Trichlorobenzene	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
1,2-Dichlorobenzene	ND	2.4	ug/L	1	06/01/18	DD	SW8270D
1,2-Diphenylhydrazine	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
1,3-Dichlorobenzene	ND	2.4	ug/L	1	06/01/18	DD	SW8270D
1,4-Dichlorobenzene	ND	2.4	ug/L	1	06/01/18	DD	SW8270D
2,4,5-Trichlorophenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
2,4,6-Trichlorophenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
2,4-Dichlorophenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
2,4-Dimethylphenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
2,4-Dinitrophenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
2,4-Dinitrotoluene	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
2,6-Dinitrotoluene	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
2-Chloronaphthalene	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
2-Chlorophenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
2-Methylphenol (o-cresol)	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
2-Nitroaniline	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
2-Nitrophenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	9.4	ug/L	1	06/01/18	DD	SW8270D
3,3'-Dichlorobenzidine	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
3-Nitroaniline	ND	4.7	ug/L	1	06/01/18	DD	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-9D

Phoenix I.D.: CA59003

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4,6-Dinitro-2-methylphenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
4-Bromophenyl phenyl ether	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
4-Chloro-3-methylphenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
4-Chloroaniline	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
4-Chlorophenyl phenyl ether	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
4-Nitroaniline	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
4-Nitrophenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
Acetophenone	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Aniline	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Benzidine	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Benzoic acid	ND	47	ug/L	1	06/01/18	DD	SW8270D
Benzyl butyl phthalate	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Bis(2-chloroethoxy)methane	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Bis(2-chloroethyl)ether	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
Bis(2-chloroisopropyl)ether	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Carbazole	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Diethyl phthalate	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Dimethylphthalate	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Di-n-butylphthalate	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Di-n-octylphthalate	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Isophorone	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
N-Nitrosodimethylamine	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
N-Nitrosodi-n-propylamine	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
N-Nitrosodiphenylamine	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Phenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	78		%	1	06/01/18	DD	15 - 110 %
% 2-Fluorobiphenyl	76		%	1	06/01/18	DD	30 - 130 %
% 2-Fluorophenol	50		%	1	06/01/18	DD	15 - 110 %
% Nitrobenzene-d5	65		%	1	06/01/18	DD	30 - 130 %
% Phenol-d5	54		%	1	06/01/18	DD	15 - 110 %
% Terphenyl-d14	85		%	1	06/01/18	DD	30 - 130 %
Semivolatiles (SIM)							
1,2,4,5-Tetrachlorobenzene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
2-Methylnaphthalene	ND	0.94	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthylene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Anthracene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benz(a)anthracene	0.08	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(a)pyrene	0.07	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(b)fluoranthene	0.05	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.19	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(k)fluoranthene	0.05	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Bis(2-ethylhexyl)phthalate	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Chrysene	0.08	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.01	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenzofuran	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluoranthene	0.07	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-9D

Phoenix I.D.: CA59003

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Hexachlorobenzene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorobutadiene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachlorocyclopentadiene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Hexachloroethane	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Naphthalene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Nitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachloronitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pentachlorophenol	ND	0.75	ug/L	1	05/31/18	DD	SW8270D (SIM)
Phenanthrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyrene	0.13	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Pyridine	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
QA/QC Surrogates							
% 2,4,6-Tribromophenol	101		%	1	05/31/18	DD	15 - 110 %
% 2-Fluorobiphenyl	69		%	1	05/31/18	DD	30 - 130 %
% 2-Fluorophenol	57		%	1	05/31/18	DD	15 - 110 %
% Nitrobenzene-d5	80		%	1	05/31/18	DD	30 - 130 %
% Phenol-d5	65		%	1	05/31/18	DD	15 - 110 %
% Terphenyl-d14	70		%	1	05/31/18	DD	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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
June 07, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

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

Analysis Report

June 07, 2018

FOR: Attn: Ms.Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/24/18	15:48
Location Code:	TIGHE-DAS	Received by:	LB	05/24/18	17:59
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA58993
Phoenix ID: CA59004

Project ID: ROCKVILLE MGP
Client ID: MW-DUP 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Arsenic	< 0.004	0.004	mg/L	1	05/29/18	MA	SW6010C
Barium	0.111	0.002	mg/L	1	05/29/18	MA	SW6010C
Beryllium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Cadmium	< 0.001	0.001	mg/L	1	05/29/18	MA	SW6010C
Chromium	0.003	0.001	mg/L	1	05/29/18	MA	SW6010C
Copper	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Mercury	< 0.0002	0.0002	mg/L	1	05/30/18	RS	SW7470A
Nickel	0.014	0.001	mg/L	1	05/29/18	MA	SW6010C
Lead	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Antimony	< 0.005	0.005	mg/L	1	05/29/18	MA	SW6010C
Selenium	< 0.010	0.010	mg/L	1	05/29/18	MA	SW6010C
Thallium	< 0.0005	0.0005	mg/L	5	05/30/18	CPP	SW6020B
Vanadium	< 0.002	0.002	mg/L	1	05/29/18	MA	SW6010C
Zinc	0.010	0.002	mg/L	1	05/29/18	MA	SW6010C
Total Cyanide	< 0.010	0.010	mg/L	1	05/31/18	O/GD	SW9010C/SW9012B
Extraction of CT ETPH	Completed				05/30/18	P/D	SW3510C/SW3520C
Mercury Digestion	Completed				05/30/18	I/I	SW7470A
Semi-Volatile Extraction	Completed				05/29/18	P/R/D	SW3520C
Total Metals Digestion	Completed				05/26/18	AG	
Total Metals Digestion MS	Completed				05/29/18	AG	
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	0.066	mg/L	1	05/31/18	JRB	CTETPH 8015D
Identification	ND		mg/L	1	05/31/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	74		%	1	05/31/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-DUP 2

Phoenix I.D.: CA59004

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	05/29/18	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	05/29/18	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
Acetone	ND	25	ug/L	1	05/29/18	MH	SW8260C
Acrylonitrile	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
Benzene	ND	0.70	ug/L	1	05/29/18	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	05/29/18	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	05/29/18	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	05/29/18	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-DUP 2

Phoenix I.D.: CA59004

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Naphthalene	1.7	1.0	ug/L	1	05/29/18	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Styrene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	05/29/18	MH	SW8260C
Toluene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Total Xylenes	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	05/29/18	MH	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	05/29/18	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	05/29/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	05/29/18	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	05/29/18	MH	70 - 130 %
% Dibromofluoromethane	103		%	1	05/29/18	MH	70 - 130 %
% Toluene-d8	98		%	1	05/29/18	MH	70 - 130 %
Semivolatiles							
1,2,4-Trichlorobenzene	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
1,2-Dichlorobenzene	ND	2.4	ug/L	1	06/01/18	DD	SW8270D
1,2-Diphenylhydrazine	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
1,3-Dichlorobenzene	ND	2.4	ug/L	1	06/01/18	DD	SW8270D
1,4-Dichlorobenzene	ND	2.4	ug/L	1	06/01/18	DD	SW8270D
2,4,5-Trichlorophenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
2,4,6-Trichlorophenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
2,4-Dichlorophenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
2,4-Dimethylphenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
2,4-Dinitrophenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
2,4-Dinitrotoluene	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
2,6-Dinitrotoluene	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
2-Chloronaphthalene	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
2-Chlorophenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
2-Methylphenol (o-cresol)	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
2-Nitroaniline	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
2-Nitrophenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	9.4	ug/L	1	06/01/18	DD	SW8270D
3,3'-Dichlorobenzidine	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
3-Nitroaniline	ND	4.7	ug/L	1	06/01/18	DD	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-DUP 2

Phoenix I.D.: CA59004

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4,6-Dinitro-2-methylphenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
4-Bromophenyl phenyl ether	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
4-Chloro-3-methylphenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
4-Chloroaniline	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
4-Chlorophenyl phenyl ether	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
4-Nitroaniline	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
4-Nitrophenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
Acetophenone	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Aniline	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Benzidine	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Benzoic acid	ND	47	ug/L	1	06/01/18	DD	SW8270D
Benzyl butyl phthalate	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Bis(2-chloroethoxy)methane	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Bis(2-chloroethyl)ether	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
Bis(2-chloroisopropyl)ether	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Carbazole	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Diethyl phthalate	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Dimethylphthalate	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Di-n-butylphthalate	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Di-n-octylphthalate	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Isophorone	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
N-Nitrosodimethylamine	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
N-Nitrosodi-n-propylamine	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
N-Nitrosodiphenylamine	ND	4.7	ug/L	1	06/01/18	DD	SW8270D
Phenol	ND	0.94	ug/L	1	06/01/18	DD	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	86		%	1	06/01/18	DD	15 - 110 %
% 2-Fluorobiphenyl	82		%	1	06/01/18	DD	30 - 130 %
% 2-Fluorophenol	56		%	1	06/01/18	DD	15 - 110 %
% Nitrobenzene-d5	72		%	1	06/01/18	DD	30 - 130 %
% Phenol-d5	48		%	1	06/01/18	DD	15 - 110 %
% Terphenyl-d14	89		%	1	06/01/18	DD	30 - 130 %
Semivolatiles (SIM)							
1,2,4,5-Tetrachlorobenzene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
2-Methylnaphthalene	ND	0.94	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Acenaphthylene	0.06	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Anthracene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benz(a)anthracene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(a)pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.19	ug/L	1	05/31/18	DD	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Bis(2-ethylhexyl)phthalate	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.01	ug/L	1	05/31/18	DD	SW8270D (SIM)
Dibenzofuran	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluoranthene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-DUP 2

Phoenix I.D.: CA59004

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Hexachlorobenzene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Hexachlorobutadiene	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Hexachlorocyclopentadiene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Hexachloroethane	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Naphthalene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Nitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Pentachloronitrobenzene	ND	0.09	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Pentachlorophenol	ND	0.75	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Phenanthrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Pyrene	ND	0.05	ug/L	1	05/31/18	DD	SW8270D (SIM)	
Pyridine	ND	0.47	ug/L	1	05/31/18	DD	SW8270D (SIM)	
QA/QC Surrogates								
% 2,4,6-Tribromophenol	111		%	1	05/31/18	DD	15 - 110 %	3
% 2-Fluorobiphenyl	75		%	1	05/31/18	DD	30 - 130 %	
% 2-Fluorophenol	64		%	1	05/31/18	DD	15 - 110 %	
% Nitrobenzene-d5	83		%	1	05/31/18	DD	30 - 130 %	
% Phenol-d5	59		%	1	05/31/18	DD	15 - 110 %	
% Terphenyl-d14	78		%	1	05/31/18	DD	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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

Semi-Volatile Comment:
One of the surrogate recoveries was above the upper range due to sample matrix interference. The other surrogates associated with this sample were within QA/QC criteria. No significant bias is suspected.

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
June 07, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

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

Analysis Report

June 07, 2018

FOR: Attn: Ms.Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/24/18	
Location Code:	TIGHE-DAS	Received by:	LB	05/24/18	17:59
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA58993
Phoenix ID: CA59005

Project ID: ROCKVILLE MGP
Client ID: TRIP BLANK

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	05/27/18	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	05/27/18	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	05/27/18	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	05/27/18	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	05/27/18	MH	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	05/27/18	MH	SW8260C

Project ID: ROCKVILLE MGP
Client ID: TRIP BLANK

Phoenix I.D.: CA59005

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	05/27/18	MH	SW8260C
Acrylonitrile	ND	0.50	ug/L	1	05/27/18	MH	SW8260C
Benzene	ND	0.70	ug/L	1	05/27/18	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	05/27/18	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	05/27/18	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	05/27/18	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	05/27/18	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	05/27/18	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	05/27/18	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Styrene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	05/27/18	MH	SW8260C
Toluene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Total Xylenes	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	05/27/18	MH	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	05/27/18	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	05/27/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	05/27/18	MH	70 - 130 %
% Bromofluorobenzene	92		%	1	05/27/18	MH	70 - 130 %
% Dibromofluoromethane	103		%	1	05/27/18	MH	70 - 130 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: TRIP BLANK

Phoenix I.D.: CA59005

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	97		%	1	05/27/18	MH	70 - 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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
June 07, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
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QA/QC Report

June 07, 2018

QA/QC Data

SDG I.D.: GCA58993

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 432263 (mg/L), QC Sample No: CA58594 (CA58993, CA58994, CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003, CA59004)													
ICP Metals - Aqueous													
Antimony	BRL	0.005	<0.005	<0.005	NC	99.6			99.5			75 - 125	20
Arsenic	BRL	0.004	<0.004	<0.004	NC	102			100			75 - 125	20
Barium	BRL	0.002	0.009	0.009	NC	104			102			75 - 125	20
Beryllium	BRL	0.001	<0.001	<0.001	NC	104			100			75 - 125	20
Cadmium	BRL	0.001	<0.001	<0.001	NC	105			103			75 - 125	20
Chromium	BRL	0.001	<0.001	<0.001	NC	104			102			75 - 125	20
Copper	BRL	0.005	<0.005	<0.005	NC	100			100			75 - 125	20
Lead	BRL	0.002	<0.002	<0.002	NC	105			102			75 - 125	20
Nickel	BRL	0.001	<0.001	<0.001	NC	106			103			75 - 125	20
Selenium	BRL	0.010	<0.010	<0.010	NC	97.7			95.4			75 - 125	20
Silver	BRL	0.001	<0.001	<0.001	NC	98.9			97.1			75 - 125	20
Vanadium	BRL	0.002	<0.002	<0.002	NC	101			101			75 - 125	20
Zinc	BRL	0.002	0.002	0.002	NC	102			100			75 - 125	20
QA/QC Batch 432187 (mg/L), QC Sample No: CA58912 5X (CA58993, CA58994, CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003)													
ICP MS Metals - Aqueous													
Thallium	BRL	0.0015	<0.0005	<0.0015	NC	103			97.4			75 - 125	20
QA/QC Batch 432054 (mg/L), QC Sample No: CA58955 (CA58993, CA58994)													
Mercury - Water	BRL	0.0002	<0.0002	<0.0002	NC	83.2			87.3			80 - 120	20
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 432060 (mg/L), QC Sample No: CA58995 (CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003, CA59004)													
Mercury - Water	BRL	0.0002	<0.0002	<0.0002	NC	98.3			90.6			80 - 120	20
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 432375 (mg/L), QC Sample No: CA59645 5X (CA59004)													
ICP MS Metals - Aqueous													
Thallium	BRL	0.0015	<0.0005	<0.0015	NC	94.8			97.4			75 - 125	20

Environmental Laboratories, Inc.
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QA/QC Report

June 07, 2018

QA/QC Data

SDG I.D.: GCA58993

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 432201 (mg/L), QC Sample No: CA52316 (CA58993, CA58994)														
Total Cyanide	BRL	0.010	0.071	0.068	4.30	93.1			70.1			90 - 110	20	m
Comment:														
Cyanide blank spike recovery was 104 %.														
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils														
QA/QC Batch 432575 (mg/L), QC Sample No: CA58995 (CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003, CA59004)														
Total Cyanide	BRL	0.010	<0.010	<0.010	NC	93.5			104			90 - 110	20	
Comment:														
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils														

m = This parameter is outside laboratory MS/MSD specified recovery limits.

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QA/QC Report

June 07, 2018

QA/QC Data

SDG I.D.: GCA58993

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 432353 (ug/L), QC Sample No: CA58912 (CA58995 (20X))										
Volatiles - Ground Water										
Benzene	ND	0.70	105	102	2.9				70 - 130	30
Ethylbenzene	ND	1.0	106	104	1.9				70 - 130	30
m&p-Xylene	ND	1.0	104	101	2.9				70 - 130	30
Naphthalene	ND	1.0	110	120	8.7				70 - 130	30
o-Xylene	ND	1.0	108	104	3.8				70 - 130	30
Toluene	ND	1.0	109	106	2.8				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 432382 (ug/L), QC Sample No: CA58993 (CA58993, CA58994, CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003, CA59004)

Semivolatiles (SIM) - Ground Water

1,2,4,5-Tetrachlorobenzene	ND	0.50	63	64	1.6				30 - 130	20
2-Methylnaphthalene	ND	0.02	63	65	3.1				30 - 130	20
Acenaphthene	ND	0.02	74	74	0.0				30 - 130	20
Acenaphthylene	ND	0.02	67	66	1.5				30 - 130	20
Anthracene	ND	0.02	75	73	2.7				30 - 130	20
Benz(a)anthracene	ND	0.02	80	77	3.8				30 - 130	20
Benzo(a)pyrene	ND	0.02	70	69	1.4				30 - 130	20
Benzo(b)fluoranthene	ND	0.02	79	76	3.9				30 - 130	20
Benzo(ghi)perylene	ND	0.02	68	72	5.7				30 - 130	20
Benzo(k)fluoranthene	ND	0.02	81	78	3.8				30 - 130	20
Bis(2-ethylhexyl)phthalate	ND	0.10	101	89	12.6				30 - 130	20
Chrysene	ND	0.02	79	75	5.2				30 - 130	20
Dibenz(a,h)anthracene	ND	0.01	73	81	10.4				30 - 130	20
Dibenzofuran	ND	0.05	68	67	1.5				30 - 130	20
Fluoranthene	ND	0.02	77	76	1.3				30 - 130	20
Fluorene	ND	0.02	73	71	2.8				30 - 130	20
Hexachlorobenzene	ND	0.02	75	72	4.1				30 - 130	20
Hexachlorobutadiene	ND	0.05	53	57	7.3				30 - 130	20
Hexachlorocyclopentadiene	ND	0.05	30	35	15.4				30 - 130	20
Hexachloroethane	ND	0.05	64	72	11.8				30 - 130	20
Indeno(1,2,3-cd)pyrene	ND	0.02	69	73	5.6				30 - 130	20
Naphthalene	ND	0.1	59	63	6.6				30 - 130	20
Nitrobenzene	ND	0.05	82	90	9.3				30 - 130	20
Pentachloronitrobenzene	ND	0.10	105	101	3.9				30 - 130	20
Pentachlorophenol	ND	0.20	99	104	4.9				30 - 130	20
Phenanthrene	ND	0.02	74	72	2.7				30 - 130	20
Pyrene	ND	0.02	80	79	1.3				30 - 130	20
Pyridine	ND	0.50	45	52	14.4				30 - 130	20

QA/QC Data

SDG I.D.: GCA58993

Parameter	Blank	Blk RL		LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% 2,4,6-Tribromophenol	72	%		84	83	1.2				15 - 110	20
% 2-Fluorobiphenyl	62	%		64	66	3.1				30 - 130	20
% 2-Fluorophenol	52	%		37	41	10.3				15 - 110	20
% Nitrobenzene-d5	87	%		73	78	6.6				30 - 130	20
% Phenol-d5	70	%		54	57	5.4				15 - 110	20
% Terphenyl-d14	73	%		76	75	1.3				30 - 130	20

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%)

QA/QC Batch 432382 (ug/L), QC Sample No: CA58993 (CA58993, CA58994, CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003, CA59004)

Semivolatiles - Ground Water

1,2,4,5-Tetrachlorobenzene	ND	3.5	68	73	7.1				30 - 130	20
1,2,4-Trichlorobenzene	ND	3.5	60	65	8.0				30 - 130	20
1,2-Dichlorobenzene	ND	1.0	56	60	6.9				30 - 130	20
1,2-Diphenylhydrazine	ND	1.6	82	79	3.7				30 - 130	20
1,3-Dichlorobenzene	ND	1.0	55	63	13.6				30 - 130	20
1,4-Dichlorobenzene	ND	1.0	54	62	13.8				30 - 130	20
2,4,5-Trichlorophenol	ND	1.0	85	84	1.2				30 - 130	20
2,4,6-Trichlorophenol	ND	1.0	81	82	1.2				30 - 130	20
2,4-Dichlorophenol	ND	1.0	68	63	7.6				30 - 130	20
2,4-Dimethylphenol	ND	1.0	75	69	8.3				30 - 130	20
2,4-Dinitrophenol	ND	1.0	83	86	3.6				30 - 130	20
2,4-Dinitrotoluene	ND	3.5	91	90	1.1				30 - 130	20
2,6-Dinitrotoluene	ND	3.5	91	87	4.5				30 - 130	20
2-Chloronaphthalene	ND	3.5	76	77	1.3				30 - 130	20
2-Chlorophenol	ND	1.0	53	60	12.4				30 - 130	20
2-Methylnaphthalene	ND	3.5	67	72	7.2				30 - 130	20
2-Methylphenol (o-cresol)	ND	1.0	59	51	14.5				30 - 130	20
2-Nitroaniline	ND	3.5	119	110	7.9				30 - 130	20
2-Nitrophenol	ND	1.0	67	74	9.9				30 - 130	20
3&4-Methylphenol (m&p-cresol)	ND	1.0	67	62	7.8				30 - 130	20
3,3'-Dichlorobenzidine	ND	5.0	96	94	2.1				30 - 130	20
3-Nitroaniline	ND	5.0	95	91	4.3				30 - 130	20
4,6-Dinitro-2-methylphenol	ND	1.0	88	87	1.1				30 - 130	20
4-Bromophenyl phenyl ether	ND	3.5	85	81	4.8				30 - 130	20
4-Chloro-3-methylphenol	ND	1.0	80	81	1.2				30 - 130	20
4-Chloroaniline	ND	3.5	69	71	2.9				30 - 130	20
4-Chlorophenyl phenyl ether	ND	1.0	87	85	2.3				30 - 130	20
4-Nitroaniline	ND	5.0	80	77	3.8				30 - 130	20
4-Nitrophenol	ND	1.0	89	81	9.4				15 - 130	20
Acenaphthene	ND	1.5	85	86	1.2				30 - 130	20
Acenaphthylene	ND	3.5	77	76	1.3				30 - 130	20
Acetophenone	ND	3.5	66	65	1.5				30 - 130	20
Aniline	ND	3.5	55	60	8.7				30 - 130	20
Anthracene	ND	1.5	88	84	4.7				30 - 130	20
Benz(a)anthracene	ND	1.5	90	85	5.7				30 - 130	20
Benzidine	ND	4.5	110	116	5.3				30 - 130	20
Benzo(a)pyrene	ND	1.5	81	76	6.4				30 - 130	20
Benzo(b)fluoranthene	ND	1.5	91	86	5.6				30 - 130	20
Benzo(ghi)perylene	ND	1.5	92	80	14.0				30 - 130	20
Benzo(k)fluoranthene	ND	1.5	95	89	6.5				30 - 130	20

QA/QC Data

SDG I.D.: GCA58993

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Benzoic acid	ND	10	36	34	5.7				30 - 130	20
Benzyl butyl phthalate	ND	1.5	85	82	3.6				30 - 130	20
Bis(2-chloroethoxy)methane	ND	3.5	65	60	8.0				30 - 130	20
Bis(2-chloroethyl)ether	ND	1.0	49	57	15.1				30 - 130	20
Bis(2-chloroisopropyl)ether	ND	1.0	43	37	15.0				30 - 130	20
Bis(2-ethylhexyl)phthalate	ND	1.5	84	83	1.2				30 - 130	20
Carbazole	ND	5.0	93	88	5.5				30 - 130	20
Chrysene	ND	1.5	93	88	5.5				30 - 130	20
Dibenz(a,h)anthracene	ND	1.5	101	89	12.6				30 - 130	20
Dibenzofuran	ND	3.5	84	83	1.2				30 - 130	20
Diethyl phthalate	ND	1.5	91	88	3.4				30 - 130	20
Dimethylphthalate	ND	1.5	87	84	3.5				30 - 130	20
Di-n-butylphthalate	ND	1.5	88	86	2.3				30 - 130	20
Di-n-octylphthalate	ND	1.5	90	88	2.2				30 - 130	20
Fluoranthene	ND	1.5	92	86	6.7				30 - 130	20
Fluorene	ND	1.5	88	86	2.3				30 - 130	20
Hexachlorobenzene	ND	3.5	88	84	4.7				30 - 130	20
Hexachlorobutadiene	ND	3.5	61	71	15.2				30 - 130	20
Hexachlorocyclopentadiene	ND	3.5	30	34	12.5				30 - 130	20
Hexachloroethane	ND	3.5	54	60	10.5				30 - 130	20
Indeno(1,2,3-cd)pyrene	ND	3.5	95	82	14.7				30 - 130	20
Isophorone	ND	3.5	65	61	6.3				30 - 130	20
Naphthalene	ND	1.5	63	69	9.1				30 - 130	20
Nitrobenzene	ND	3.5	63	65	3.1				30 - 130	20
N-Nitrosodimethylamine	ND	1.0	45	51	12.5				30 - 130	20
N-Nitrosodi-n-propylamine	ND	3.5	65	65	0.0				30 - 130	20
N-Nitrosodiphenylamine	ND	3.5	82	77	6.3				30 - 130	20
Pentachloronitrobenzene	ND	5.0	88	84	4.7				30 - 130	20
Pentachlorophenol	ND	3.5	98	91	7.4				30 - 130	20
Phenanthrene	ND	1.5	89	86	3.4				30 - 130	20
Phenol	ND	1.0	51	55	7.5				15 - 130	20
Pyrene	ND	1.5	94	88	6.6				30 - 130	20
Pyridine	ND	5.0	37	44	17.3				30 - 130	20
% 2,4,6-Tribromophenol	68	%	83	79	4.9				15 - 110	20
% 2-Fluorobiphenyl	74	%	77	80	3.8				30 - 130	20
% 2-Fluorophenol	51	%	44	49	10.8				15 - 110	20
% Nitrobenzene-d5	63	%	61	64	4.8				30 - 130	20
% Phenol-d5	57	%	49	54	9.7				15 - 110	20
% Terphenyl-d14	85	%	93	89	4.4				30 - 130	20

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%)

QA/QC Batch 432677 (ug/L), QC Sample No: CA58998 (CA58997 (100X) , CA58998, CA59003)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	90	96	6.5				70 - 130	30
1,1,1-Trichloroethane	ND	1.0	86	93	7.8				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	92	99	7.3				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	87	95	8.8				70 - 130	30
1,1-Dichloroethane	ND	1.0	88	95	7.7				70 - 130	30
1,1-Dichloroethene	ND	1.0	87	94	7.7				70 - 130	30
1,1-Dichloropropene	ND	1.0	88	96	8.7				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	86	95	9.9				70 - 130	30

QA/QC Data

SDG I.D.: GCA58993

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2,3-Trichloropropane	ND	1.0	87	96	9.8				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	88	96	8.7				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	88	95	7.7				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	92	102	10.3				70 - 130	30
1,2-Dibromoethane	ND	1.0	89	96	7.6				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	86	93	7.8				70 - 130	30
1,2-Dichloroethane	ND	1.0	87	94	7.7				70 - 130	30
1,2-Dichloropropane	ND	1.0	88	97	9.7				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	88	96	8.7				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	87	94	7.7				70 - 130	30
1,3-Dichloropropane	ND	1.0	88	94	6.6				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	86	93	7.8				70 - 130	30
2,2-Dichloropropane	ND	1.0	92	98	6.3				70 - 130	30
2-Chlorotoluene	ND	1.0	88	95	7.7				70 - 130	30
2-Hexanone	ND	5.0	86	94	8.9				70 - 130	30
2-Isopropyltoluene	ND	1.0	93	100	7.3				70 - 130	30
4-Chlorotoluene	ND	1.0	88	95	7.7				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	88	96	8.7				70 - 130	30
Acetone	ND	5.0	81	85	4.8				70 - 130	30
Acrylonitrile	ND	5.0	99	105	5.9				70 - 130	30
Benzene	ND	0.70	88	97	9.7				70 - 130	30
Bromobenzene	ND	1.0	89	96	7.6				70 - 130	30
Bromochloromethane	ND	1.0	90	95	5.4				70 - 130	30
Bromodichloromethane	ND	0.50	88	97	9.7				70 - 130	30
Bromoform	ND	1.0	90	98	8.5				70 - 130	30
Bromomethane	ND	1.0	112	121	7.7				70 - 130	30
Carbon Disulfide	ND	1.0	100	106	5.8				70 - 130	30
Carbon tetrachloride	ND	1.0	87	94	7.7				70 - 130	30
Chlorobenzene	ND	1.0	87	95	8.8				70 - 130	30
Chloroethane	ND	1.0	87	93	6.7				70 - 130	30
Chloroform	ND	1.0	87	94	7.7				70 - 130	30
Chloromethane	ND	1.0	79	87	9.6				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	89	96	7.6				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	88	97	9.7				70 - 130	30
Dibromochloromethane	ND	0.50	94	101	7.2				70 - 130	30
Dibromomethane	ND	1.0	88	96	8.7				70 - 130	30
Dichlorodifluoromethane	ND	1.0	65	70	7.4				70 - 130	30
Ethylbenzene	ND	1.0	88	96	8.7				70 - 130	30
Hexachlorobutadiene	ND	0.40	92	99	7.3				70 - 130	30
Isopropylbenzene	ND	1.0	89	96	7.6				70 - 130	30
m&p-Xylene	ND	1.0	86	94	8.9				70 - 130	30
Methyl ethyl ketone	ND	5.0	95	98	3.1				70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	80	86	7.2				70 - 130	30
Methylene chloride	ND	1.0	85	92	7.9				70 - 130	30
Naphthalene	ND	1.0	89	99	10.6				70 - 130	30
n-Butylbenzene	ND	1.0	92	99	7.3				70 - 130	30
n-Propylbenzene	ND	1.0	89	96	7.6				70 - 130	30
o-Xylene	ND	1.0	87	95	8.8				70 - 130	30
p-Isopropyltoluene	ND	1.0	89	96	7.6				70 - 130	30
sec-Butylbenzene	ND	1.0	92	100	8.3				70 - 130	30
Styrene	ND	1.0	88	96	8.7				70 - 130	30
tert-Butylbenzene	ND	1.0	88	95	7.7				70 - 130	30
Tetrachloroethene	ND	1.0	89	97	8.6				70 - 130	30

QA/QC Data

SDG I.D.: GCA58993

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Tetrahydrofuran (THF)	ND	2.5	89	97	8.6				70 - 130	30
Toluene	ND	1.0	87	96	9.8				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	91	97	6.4				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	86	94	8.9				70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	101	107	5.8				70 - 130	30
Trichloroethene	ND	1.0	89	98	9.6				70 - 130	30
Trichlorofluoromethane	ND	1.0	84	89	5.8				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	89	95	6.5				70 - 130	30
Vinyl chloride	ND	1.0	81	86	6.0				70 - 130	30
% 1,2-dichlorobenzene-d4	100	%	100	100	0.0				70 - 130	30
% Bromofluorobenzene	93	%	97	99	2.0				70 - 130	30
% Dibromofluoromethane	102	%	101	100	1.0				70 - 130	30
% Toluene-d8	98	%	100	101	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 432344 (ug/L), QC Sample No: CA59005 (CA59001, CA59005)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	94	97	3.1				70 - 130	30
1,1,1-Trichloroethane	ND	1.0	90	92	2.2				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	107	108	0.9				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	97	99	2.0				70 - 130	30
1,1-Dichloroethane	ND	1.0	94	98	4.2				70 - 130	30
1,1-Dichloroethene	ND	1.0	96	99	3.1				70 - 130	30
1,1-Dichloropropene	ND	1.0	96	99	3.1				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	92	92	0.0				70 - 130	30
1,2,3-Trichloropropane	ND	1.0	101	102	1.0				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	89	92	3.3				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	90	93	3.3				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	104	103	1.0				70 - 130	30
1,2-Dibromoethane	ND	1.0	98	100	2.0				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	90	93	3.3				70 - 130	30
1,2-Dichloroethane	ND	1.0	94	95	1.1				70 - 130	30
1,2-Dichloropropane	ND	1.0	96	99	3.1				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	89	92	3.3				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	91	93	2.2				70 - 130	30
1,3-Dichloropropane	ND	1.0	99	100	1.0				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	89	91	2.2				70 - 130	30
2,2-Dichloropropane	ND	1.0	98	100	2.0				70 - 130	30
2-Chlorotoluene	ND	1.0	90	93	3.3				70 - 130	30
2-Hexanone	ND	5.0	105	107	1.9				70 - 130	30
2-Isopropyltoluene	ND	1.0	100	102	2.0				70 - 130	30
4-Chlorotoluene	ND	1.0	90	92	2.2				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	105	107	1.9				70 - 130	30
Acetone	ND	5.0	95	99	4.1				70 - 130	30
Acrylonitrile	ND	5.0	122	122	0.0				70 - 130	30
Benzene	ND	0.70	96	98	2.1				70 - 130	30
Bromobenzene	ND	1.0	93	94	1.1				70 - 130	30
Bromochloromethane	ND	1.0	99	100	1.0				70 - 130	30
Bromodichloromethane	ND	0.50	94	96	2.1				70 - 130	30
Bromoform	ND	1.0	99	103	4.0				70 - 130	30
Bromomethane	ND	1.0	88	96	8.7				70 - 130	30

QA/QC Data

SDG I.D.: GCA58993

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Carbon Disulfide	ND	1.0	107	109	1.9				70 - 130	30
Carbon tetrachloride	ND	1.0	92	94	2.2				70 - 130	30
Chlorobenzene	ND	1.0	91	95	4.3				70 - 130	30
Chloroethane	ND	1.0	97	101	4.0				70 - 130	30
Chloroform	ND	1.0	90	93	3.3				70 - 130	30
Chloromethane	ND	1.0	90	96	6.5				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	97	99	2.0				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	97	99	2.0				70 - 130	30
Dibromochloromethane	ND	0.50	102	104	1.9				70 - 130	30
Dibromomethane	ND	1.0	97	98	1.0				70 - 130	30
Dichlorodifluoromethane	ND	1.0	102	105	2.9				70 - 130	30
Ethylbenzene	ND	1.0	93	97	4.2				70 - 130	30
Hexachlorobutadiene	ND	0.40	91	94	3.2				70 - 130	30
Isopropylbenzene	ND	1.0	93	94	1.1				70 - 130	30
m&p-Xylene	ND	1.0	90	95	5.4				70 - 130	30
Methyl ethyl ketone	ND	5.0	111	112	0.9				70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	104	108	3.8				70 - 130	30
Methylene chloride	ND	1.0	92	94	2.2				70 - 130	30
Naphthalene	ND	1.0	102	100	2.0				70 - 130	30
n-Butylbenzene	ND	1.0	94	97	3.1				70 - 130	30
n-Propylbenzene	ND	1.0	92	94	2.2				70 - 130	30
o-Xylene	ND	1.0	91	95	4.3				70 - 130	30
p-Isopropyltoluene	ND	1.0	91	94	3.2				70 - 130	30
sec-Butylbenzene	ND	1.0	95	99	4.1				70 - 130	30
Styrene	ND	1.0	93	97	4.2				70 - 130	30
tert-Butylbenzene	ND	1.0	89	92	3.3				70 - 130	30
Tetrachloroethene	ND	1.0	94	98	4.2				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	114	118	3.4				70 - 130	30
Toluene	ND	1.0	95	97	2.1				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	98	101	3.0				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	94	95	1.1				70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	124	125	0.8				70 - 130	30
Trichloroethene	ND	1.0	94	97	3.1				70 - 130	30
Trichlorofluoromethane	ND	1.0	93	96	3.2				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	103	105	1.9				70 - 130	30
Vinyl chloride	ND	1.0	100	103	3.0				70 - 130	30
% 1,2-dichlorobenzene-d4	100	%	101	101	0.0				70 - 130	30
% Bromofluorobenzene	94	%	98	100	2.0				70 - 130	30
% Dibromofluoromethane	103	%	100	101	1.0				70 - 130	30
% Toluene-d8	98	%	99	99	0.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 432381 (ug/L), QC Sample No: CA59074 (CA58993, CA58994, CA58995, CA58996)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	90	90	0.0				70 - 130	30
1,1,1-Trichloroethane	ND	1.0	88	87	1.1				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	81	86	6.0				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	71	78	9.4				70 - 130	30
1,1-Dichloroethane	ND	1.0	86	85	1.2				70 - 130	30
1,1-Dichloroethene	ND	1.0	93	90	3.3				70 - 130	30
1,1-Dichloropropene	ND	1.0	90	87	3.4				70 - 130	30

QA/QC Data

SDG I.D.: GCA58993

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,2,3-Trichlorobenzene	ND	1.0	79	89	11.9				70 - 130	30	
1,2,3-Trichloropropane	ND	1.0	77	83	7.5				70 - 130	30	
1,2,4-Trichlorobenzene	ND	1.0	81	88	8.3				70 - 130	30	
1,2,4-Trimethylbenzene	ND	1.0	97	93	4.2				70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	1.0	75	84	11.3				70 - 130	30	
1,2-Dibromoethane	ND	1.0	79	84	6.1				70 - 130	30	
1,2-Dichlorobenzene	ND	1.0	85	87	2.3				70 - 130	30	
1,2-Dichloroethane	ND	1.0	76	79	3.9				70 - 130	30	
1,2-Dichloropropane	ND	1.0	82	84	2.4				70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	97	92	5.3				70 - 130	30	
1,3-Dichlorobenzene	ND	1.0	89	90	1.1				70 - 130	30	
1,3-Dichloropropane	ND	1.0	78	82	5.0				70 - 130	30	
1,4-Dichlorobenzene	ND	1.0	88	89	1.1				70 - 130	30	
2,2-Dichloropropane	ND	1.0	91	88	3.4				70 - 130	30	
2-Chlorotoluene	ND	1.0	95	90	5.4				70 - 130	30	
2-Hexanone	ND	5.0	69	79	13.5				70 - 130	30	I
2-Isopropyltoluene	ND	1.0	109	106	2.8				70 - 130	30	
4-Chlorotoluene	ND	1.0	94	90	4.3				70 - 130	30	
4-Methyl-2-pentanone	ND	5.0	66	79	17.9				70 - 130	30	I
Acetone	ND	5.0	66	77	15.4				70 - 130	30	I
Acrylonitrile	ND	5.0	81	87	7.1				70 - 130	30	
Benzene	ND	0.70	87	85	2.3				70 - 130	30	
Bromobenzene	ND	1.0	92	89	3.3				70 - 130	30	
Bromochloromethane	ND	1.0	80	85	6.1				70 - 130	30	
Bromodichloromethane	ND	0.50	81	85	4.8				70 - 130	30	
Bromoform	ND	1.0	77	85	9.9				70 - 130	30	
Bromomethane	ND	1.0	141	134	5.1				70 - 130	30	I
Carbon Disulfide	ND	1.0	110	105	4.7				70 - 130	30	
Carbon tetrachloride	ND	1.0	89	87	2.3				70 - 130	30	
Chlorobenzene	ND	1.0	89	87	2.3				70 - 130	30	
Chloroethane	ND	1.0	106	103	2.9				70 - 130	30	
Chloroform	ND	1.0	83	84	1.2				70 - 130	30	
Chloromethane	ND	1.0	102	100	2.0				70 - 130	30	
cis-1,2-Dichloroethene	ND	1.0	83	87	4.7				70 - 130	30	
cis-1,3-Dichloropropene	ND	0.40	77	82	6.3				70 - 130	30	
Dibromochloromethane	ND	0.50	85	90	5.7				70 - 130	30	
Dibromomethane	ND	1.0	72	77	6.7				70 - 130	30	
Dichlorodifluoromethane	ND	1.0	113	108	4.5				70 - 130	30	
Ethylbenzene	ND	1.0	93	90	3.3				70 - 130	30	
Hexachlorobutadiene	ND	0.40	102	97	5.0				70 - 130	30	
Isopropylbenzene	ND	1.0	97	91	6.4				70 - 130	30	
m&p-Xylene	ND	1.0	91	88	3.4				70 - 130	30	
Methyl ethyl ketone	ND	5.0	71	81	13.2				70 - 130	30	
Methyl t-butyl ether (MTBE)	ND	1.0	77	89	14.5				70 - 130	30	
Methylene chloride	ND	1.0	83	84	1.2				70 - 130	30	
Naphthalene	ND	1.0	79	85	7.3				70 - 130	30	
n-Butylbenzene	ND	1.0	92	92	0.0				70 - 130	30	
n-Propylbenzene	ND	1.0	95	91	4.3				70 - 130	30	
o-Xylene	ND	1.0	91	89	2.2				70 - 130	30	
p-Isopropyltoluene	ND	1.0	93	93	0.0				70 - 130	30	
sec-Butylbenzene	ND	1.0	92	93	1.1				70 - 130	30	
Styrene	ND	1.0	88	88	0.0				70 - 130	30	
tert-Butylbenzene	ND	1.0	92	91	1.1				70 - 130	30	

QA/QC Data

SDG I.D.: GCA58993

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Tetrachloroethene	ND	1.0	87	88	1.1				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	73	81	10.4				70 - 130	30
Toluene	ND	1.0	87	87	0.0				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	91	88	3.4				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	73	79	7.9				70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	92	98	6.3				70 - 130	30
Trichloroethene	ND	1.0	91	88	3.4				70 - 130	30
Trichlorofluoromethane	ND	1.0	100	96	4.1				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	105	103	1.9				70 - 130	30
Vinyl chloride	ND	1.0	102	95	7.1				70 - 130	30
% 1,2-dichlorobenzene-d4	91	%	96	98	2.1				70 - 130	30
% Bromofluorobenzene	93	%	95	98	3.1				70 - 130	30
% Dibromofluoromethane	91	%	88	93	5.5				70 - 130	30
% Toluene-d8	91	%	99	99	0.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 432568 (mg/L), QC Sample No: CA59173 (CA58993, CA58994, CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003, CA59004)

TPH by GC (Extractable Products) - Ground Water

Ext. Petroleum H.C. (C9-C36)	ND	0.10	88	86	2.3				60 - 120	30
% n-Pentacosane	68	%	69	69	0.0				50 - 150	20

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 432347 (ug/L), QC Sample No: CA59634 (CA58996 (20X))

Volatiles - Ground Water

Naphthalene	ND	1.0	94	111	16.6				70 - 130	30
o-Xylene	ND	1.0	105	104	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 432528 (ug/L), QC Sample No: CA59920 (CA58997 (10X, 50X) , CA58999, CA59000, CA59001 (10X) , CA59002, CA59004)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	96	95	1.0				70 - 130	30
1,1,1-Trichloroethane	ND	1.0	93	94	1.1				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	101	100	1.0				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	99	97	2.0				70 - 130	30
1,1-Dichloroethane	ND	1.0	94	95	1.1				70 - 130	30
1,1-Dichloroethene	ND	1.0	95	97	2.1				70 - 130	30
1,1-Dichloropropene	ND	1.0	93	96	3.2				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	99	98	1.0				70 - 130	30
1,2,3-Trichloropropane	ND	1.0	97	97	0.0				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	97	96	1.0				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	92	95	3.2				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	102	102	0.0				70 - 130	30
1,2-Dibromoethane	ND	1.0	97	97	0.0				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	93	93	0.0				70 - 130	30
1,2-Dichloroethane	ND	1.0	96	94	2.1				70 - 130	30

QA/QC Data

SDG I.D.: GCA58993

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2-Dichloropropane	ND	1.0	96	96	0.0				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	92	95	3.2				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	92	94	2.2				70 - 130	30
1,3-Dichloropropane	ND	1.0	96	94	2.1				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	90	92	2.2				70 - 130	30
2,2-Dichloropropane	ND	1.0	83	83	0.0				70 - 130	30
2-Chlorotoluene	ND	1.0	91	94	3.2				70 - 130	30
2-Hexanone	ND	5.0	97	94	3.1				70 - 130	30
2-Isopropyltoluene	ND	1.0	96	101	5.1				70 - 130	30
4-Chlorotoluene	ND	1.0	91	93	2.2				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	100	97	3.0				70 - 130	30
Acetone	ND	5.0	94	97	3.1				70 - 130	30
Acrylonitrile	ND	5.0	105	107	1.9				70 - 130	30
Benzene	ND	0.70	94	95	1.1				70 - 130	30
Bromobenzene	ND	1.0	95	97	2.1				70 - 130	30
Bromochloromethane	ND	1.0	98	95	3.1				70 - 130	30
Bromodichloromethane	ND	0.50	96	97	1.0				70 - 130	30
Bromoform	ND	1.0	102	99	3.0				70 - 130	30
Bromomethane	ND	1.0	114	118	3.4				70 - 130	30
Carbon Disulfide	ND	1.0	107	110	2.8				70 - 130	30
Carbon tetrachloride	ND	1.0	95	95	0.0				70 - 130	30
Chlorobenzene	ND	1.0	93	93	0.0				70 - 130	30
Chloroethane	ND	1.0	94	94	0.0				70 - 130	30
Chloroform	ND	1.0	94	95	1.1				70 - 130	30
Chloromethane	ND	1.0	90	93	3.3				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	96	96	0.0				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	94	93	1.1				70 - 130	30
Dibromochloromethane	ND	0.50	103	101	2.0				70 - 130	30
Dibromomethane	ND	1.0	97	95	2.1				70 - 130	30
Dichlorodifluoromethane	ND	1.0	82	89	8.2				70 - 130	30
Ethylbenzene	ND	1.0	94	95	1.1				70 - 130	30
Hexachlorobutadiene	ND	0.40	93	98	5.2				70 - 130	30
Isopropylbenzene	ND	1.0	92	95	3.2				70 - 130	30
m&p-Xylene	ND	1.0	91	93	2.2				70 - 130	30
Methyl ethyl ketone	ND	5.0	99	95	4.1				70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	91	88	3.4				70 - 130	30
Methylene chloride	ND	1.0	93	93	0.0				70 - 130	30
Naphthalene	ND	1.0	100	100	0.0				70 - 130	30
n-Butylbenzene	ND	1.0	91	96	5.3				70 - 130	30
n-Propylbenzene	ND	1.0	91	94	3.2				70 - 130	30
o-Xylene	ND	1.0	93	94	1.1				70 - 130	30
p-Isopropyltoluene	ND	1.0	92	95	3.2				70 - 130	30
sec-Butylbenzene	ND	1.0	95	98	3.1				70 - 130	30
Styrene	ND	1.0	95	95	0.0				70 - 130	30
tert-Butylbenzene	ND	1.0	91	94	3.2				70 - 130	30
Tetrachloroethene	ND	1.0	93	95	2.1				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	103	98	5.0				70 - 130	30
Toluene	ND	1.0	94	96	2.1				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	95	96	1.0				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	93	92	1.1				70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	105	103	1.9				70 - 130	30
Trichloroethene	ND	1.0	94	96	2.1				70 - 130	30
Trichlorofluoromethane	ND	1.0	91	94	3.2				70 - 130	30

QA/QC Data

SDG I.D.: GCA58993

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Trichlorotrifluoroethane	ND	1.0	93	98	5.2				70 - 130	30
Vinyl chloride	ND	1.0	89	92	3.3				70 - 130	30
% 1,2-dichlorobenzene-d4	100	%	100	99	1.0				70 - 130	30
% Bromofluorobenzene	93	%	99	99	0.0				70 - 130	30
% Dibromofluoromethane	102	%	101	99	2.0				70 - 130	30
% Toluene-d8	97	%	100	100	0.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 432919 (mg/L), QC Sample No: CA60584 (CA59001)

TPH by GC (Extractable Products) - Ground Water

Ext. Petroleum H.C. (C9-C36)	ND	0.10	89	94	5.5				60 - 120	30
% n-Pentacosane	64	%	66	65	1.5				50 - 150	20

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.

l = This parameter is outside laboratory LCS/LCSD 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
June 07, 2018

Thursday, June 07, 2018

Criteria: CT: GWP, RV, SWP

State: CT

Sample Criteria Exceedances Report

GCA58993 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CA58993	$8260GWR	1,2-Dibromo-3-chloropropane	CT / RSR GWPC (ug/l) / APS Organics	ND	0.50	0.2	0.2	ug/L
CA58993	$8260GWR	1,2-Dibromoethane	CT / RSR GWPC (ug/l) / Volatiles	ND	0.25	0.05	0.05	ug/L
CA58993	$8270-CTSIMR	Acenaphthylene	CT / RSR SWPC (ug/l) / Semivolatiles	0.63	0.05	0.3	0.3	ug/L
CA58993	$8270-CTSIMR	Dibenzofuran	CT / RSR SWPC (ug/l) / Semivolatiles	0.10	0.05	0.077	0.077	ug/L
CA58994	$8260GWR	1,2-Dibromo-3-chloropropane	CT / RSR GWPC (ug/l) / APS Organics	ND	0.50	0.2	0.2	ug/L
CA58994	$8260GWR	1,2-Dibromoethane	CT / RSR GWPC (ug/l) / Volatiles	ND	0.25	0.05	0.05	ug/L
CA58994	CR-WM	Chromium	CT / RSR GWPC (ug/l) / Inorganics	0.683	0.001	0.05	0.05	mg/L
CA58994	CU-WM	Copper	CT / RSR SWPC (ug/l) / Inorganics	0.219	0.005	0.048	0.048	mg/L
CA58994	NI-WM	Nickel	CT / RSR GWPC (ug/l) / Inorganics	5.67	0.010	0.1	0.1	mg/L
CA58994	NI-WM	Nickel	CT / RSR SWPC (ug/l) / Inorganics	5.67	0.010	0.88	0.88	mg/L
CA58995	$8260GWR	1,2-Dibromo-3-chloropropane	CT / RSR GWPC (ug/l) / APS Organics	ND	0.50	0.2	0.2	ug/L
CA58995	$8260GWR	1,2-Dibromoethane	CT / RSR GWPC (ug/l) / Volatiles	ND	0.25	0.05	0.05	ug/L
CA58995	$8260GWR	Benzene	CT / RSR GWPC (ug/l) / Volatiles	45	14	1	1	ug/L
CA58995	$8270-CTSIMR	Indeno(1,2,3-cd)pyrene	CT / RSR GWPC (ug/l) / APS Organics	0.18	0.05	0.1	0.1	ug/L
CA58995	$8270-CTSIMR	Benzo(b)fluoranthene	CT / RSR GWPC (ug/l) / Semivolatiles	0.23	0.05	0.08	0.08	ug/L
CA58995	$8270-CTSIMR	Benzo(a)pyrene	CT / RSR GWPC (ug/l) / Semivolatiles	0.39	0.05	0.2	0.2	ug/L
CA58995	$8270-CTSIMR	Benz(a)anthracene	CT / RSR GWPC (ug/l) / Semivolatiles	0.20	0.05	0.06	0.06	ug/L
CA58995	$8270-CTSIMR	Acenaphthylene	CT / RSR SWPC (ug/l) / Semivolatiles	1.3	0.05	0.3	0.3	ug/L
CA58995	$8270-CTSIMR	Benzo(a)pyrene	CT / RSR SWPC (ug/l) / Semivolatiles	0.39	0.05	0.3	0.3	ug/L
CA58995	$ETPH_WMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR GWPC (ug/l) / Pest/PCB/TPH	1.0	0.066	0.25	0.25	mg/L
CA58995	$ETPH_WMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR GWPC (ug/l) / Pest/PCB/TPH	1.0	0.066	0.5	0.5	mg/L
CA58995	$ETPH_WMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR SWPC (ug/l) / APS Organics	1.0	0.066	0.25	0.25	mg/L
CA58996	$8260GWR	1,2-Dibromo-3-chloropropane	CT / RSR GWPC (ug/l) / APS Organics	ND	0.50	0.2	0.2	ug/L
CA58996	$8260GWR	1,2-Dibromoethane	CT / RSR GWPC (ug/l) / Volatiles	ND	0.25	0.05	0.05	ug/L
CA58996	$8260GWR	Benzene	CT / RSR GWPC (ug/l) / Volatiles	2.0	0.70	1	1	ug/L
CA58996	$8270-CTSIMR	Indeno(1,2,3-cd)pyrene	CT / RSR GWPC (ug/l) / APS Organics	0.11	0.05	0.1	0.1	ug/L
CA58996	$8270-CTSIMR	Benz(a)anthracene	CT / RSR GWPC (ug/l) / Semivolatiles	0.19	0.05	0.06	0.06	ug/L
CA58996	$8270-CTSIMR	Benzo(a)pyrene	CT / RSR GWPC (ug/l) / Semivolatiles	0.22	0.05	0.2	0.2	ug/L
CA58996	$8270-CTSIMR	Benzo(b)fluoranthene	CT / RSR GWPC (ug/l) / Semivolatiles	0.11	0.05	0.08	0.08	ug/L
CA58996	$8270-CTSIMR	Dibenzofuran	CT / RSR SWPC (ug/l) / Semivolatiles	0.87	0.05	0.077	0.077	ug/L
CA58996	$8270-CTSIMR	Phenanthrene	CT / RSR SWPC (ug/l) / Semivolatiles	1.8	0.05	0.077	0.077	ug/L
CA58996	$8270-CTSIMR	Acenaphthylene	CT / RSR SWPC (ug/l) / Semivolatiles	2.4	0.05	0.3	0.3	ug/L
CA58996	$ETPH_WMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR GWPC (ug/l) / Pest/PCB/TPH	1.0	0.066	0.25	0.25	mg/L
CA58996	$ETPH_WMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR GWPC (ug/l) / Pest/PCB/TPH	1.0	0.066	0.5	0.5	mg/L
CA58996	$ETPH_WMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR SWPC (ug/l) / APS Organics	1.0	0.066	0.25	0.25	mg/L
CA58997	$8260GWR	Total Xylenes	CT / RSR SWPC (ug/l) / APS Organics	370	10	270	270	ug/L
CA58997	$8260GWR	Isopropylbenzene	CT / RSR GWPC (ug/l) / APS Organics	36	10	25	25	ug/L
CA58997	$8260GWR	Tetrahydrofuran (THF)	CT / RSR GWPC (ug/l) / APS Organics	ND	25	4	4	ug/L
CA58997	$8260GWR	1,2,4-Trimethylbenzene	CT / RSR GWPC (ug/l) / APS Organics	180	10	140	140	ug/L

Thursday, June 07, 2018

Criteria: CT: GWP, RV, SWP

State: CT

Sample Criteria Exceedances Report

GCA58993 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CA58997	$8260GWR	1,2-Dibromo-3-chloropropane	CT / RSR GWPC (ug/l) / APS Organics	ND	5.0	0.2	0.2	ug/L
CA58997	$8260GWR	Bromodichloromethane	CT / RSR GWPC (ug/l) / APS Organics	ND	2.5	1	1	ug/L
CA58997	$8260GWR	Naphthalene	CT / RSR GWPC (ug/l) / Semivolatiles	1600	100	280	280	ug/L
CA58997	$8260GWR	1,1,1,2-Tetrachloroethane	CT / RSR GWPC (ug/l) / Volatiles	ND	2.5	1	1	ug/L
CA58997	$8260GWR	Methylene chloride	CT / RSR GWPC (ug/l) / Volatiles	ND	10	5	5	ug/L
CA58997	$8260GWR	Vinyl chloride	CT / RSR GWPC (ug/l) / Volatiles	ND	2.5	2	2	ug/L
CA58997	$8260GWR	1,2-Dibromoethane	CT / RSR GWPC (ug/l) / Volatiles	ND	2.5	0.05	0.05	ug/L
CA58997	$8260GWR	1,1,2,2-Tetrachloroethane	CT / RSR GWPC (ug/l) / Volatiles	ND	2.5	0.5	0.5	ug/L
CA58997	$8260GWR	Dibromochloromethane	CT / RSR GWPC (ug/l) / Volatiles	ND	2.5	0.5	0.5	ug/L
CA58997	$8260GWR	Benzene	CT / RSR GWPC (ug/l) / Volatiles	31	7.0	1	1	ug/L
CA58997	$8260GWR	Acrylonitrile	CT / RSR GWPC (ug/l) / Volatiles	ND	2.5	0.5	0.5	ug/L
CA58997	$8260GWR	1,2-Dichloroethane	CT / RSR GWPC (ug/l) / Volatiles	ND	2.5	1	1	ug/L
CA58997	$8260GWR	Bromodichloromethane	CT / RSR GWVC RES (ug/l) / APS Organics	ND	2.5	1.1	1.1	ug/L
CA58997	$8260GWR	Vinyl chloride	CT / RSR GWVC RES (ug/l) / Volatiles	ND	2.5	2	2	ug/L
CA58997	$8260GWR	1,1-Dichloroethene	CT / RSR GWVC RES (ug/l) / Volatiles	ND	2.5	1	1	ug/L
CA58997	$8260GWR	1,2,4-Trimethylbenzene	CT / RSR SWPC (ug/l) / APS Organics	180	10	150	150	ug/L
CA58997	$8260GWR	1,2-Dibromo-3-chloropropane	CT / RSR SWPC (ug/l) / APS Organics	ND	5.0	1.1	1.1	ug/L
CA58997	$8260GWR	Naphthalene	CT / RSR SWPC (ug/l) / APS Organics	1600	100	210	210	ug/L
CA58997	$8270-WMR	4-Chloroaniline	CT / RSR GWPC (ug/l) / APS Organics	ND	19	5	5	ug/L
CA58997	$8270-WMR	3,3'-Dichlorobenzidine	CT / RSR GWPC (ug/l) / APS Organics	ND	22	5	5	ug/L
CA58997	$8270-WMR	2-Nitroaniline	CT / RSR GWPC (ug/l) / APS Organics	ND	33	10	10	ug/L
CA58997	$8270-WMR	2-Methylnaphthalene	CT / RSR GWPC (ug/l) / APS Organics	160	47	28	28	ug/L
CA58997	$8270-WMR	2,6-Dinitrotoluene	CT / RSR GWPC (ug/l) / APS Organics	ND	15	5	5	ug/L
CA58997	$8270-WMR	2,4-Dinitrotoluene	CT / RSR GWPC (ug/l) / APS Organics	ND	18	5	5	ug/L
CA58997	$8270-WMR	2,4,6-Trichlorophenol	CT / RSR GWPC (ug/l) / APS Organics	ND	8.5	5	5	ug/L
CA58997	$8270-WMR	3-Nitroaniline	CT / RSR GWPC (ug/l) / APS Organics	ND	19	10	10	ug/L
CA58997	$8270-WMR	1,2,4,5-Tetrachlorobenzene	CT / RSR GWPC (ug/l) / APS Organics	ND	17	5	5	ug/L
CA58997	$8270-WMR	1,2-Diphenylhydrazine	CT / RSR GWPC (ug/l) / APS Organics	ND	15	5	5	ug/L
CA58997	$8270-WMR	4-Nitroaniline	CT / RSR GWPC (ug/l) / APS Organics	ND	16	10	10	ug/L
CA58997	$8270-WMR	Carbazole	CT / RSR GWPC (ug/l) / APS Organics	50	47	5	5	ug/L
CA58997	$8270-WMR	Chrysene	CT / RSR GWPC (ug/l) / APS Organics	ND	16	4.8	4.8	ug/L
CA58997	$8270-WMR	Benzo(ghi)perylene	CT / RSR GWPC (ug/l) / APS Organics	ND	15	0.48	0.48	ug/L
CA58997	$8270-WMR	Dibenz(a,h)anthracene	CT / RSR GWPC (ug/l) / APS Organics	ND	15	0.1	0.1	ug/L
CA58997	$8270-WMR	Dibenzofuran	CT / RSR GWPC (ug/l) / APS Organics	ND	47	7	7	ug/L
CA58997	$8270-WMR	Indeno(1,2,3-cd)pyrene	CT / RSR GWPC (ug/l) / APS Organics	ND	16	0.1	0.1	ug/L
CA58997	$8270-WMR	Nitrobenzene	CT / RSR GWPC (ug/l) / APS Organics	ND	16	5	5	ug/L
CA58997	$8270-WMR	Benzidine	CT / RSR GWPC (ug/l) / APS Organics	ND	28	5	5	ug/L
CA58997	$8270-WMR	N-Nitrosodimethylamine	CT / RSR GWPC (ug/l) / APS Organics	ND	13	5	5	ug/L
CA58997	$8270-WMR	N-Nitrosodi-n-propylamine	CT / RSR GWPC (ug/l) / APS Organics	ND	15	5	5	ug/L
CA58997	$8270-WMR	N-Nitrosodiphenylamine	CT / RSR GWPC (ug/l) / APS Organics	ND	18	7.1	7.1	ug/L
CA58997	$8270-WMR	Aniline	CT / RSR GWPC (ug/l) / APS Organics	ND	9.4	6.1	6.1	ug/L
CA58997	$8270-WMR	Pentachloronitrobenzene	CT / RSR GWPC (ug/l) / APS Organics	ND	17	7	7	ug/L

Thursday, June 07, 2018

Criteria: CT: GWP, RV, SWP

State: CT

Sample Criteria Exceedances Report

GCA58993 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CA58997	$8270-WMR	Pyridine	CT / RSR GWPC (ug/l) / APS Organics	ND	12	5	5	ug/L
CA58997	$8270-WMR	Bis(2-ethylhexyl)phthalate	CT / RSR GWPC (ug/l) / Semivolatiles	ND	14	2	2	ug/L
CA58997	$8270-WMR	Hexachloroethane	CT / RSR GWPC (ug/l) / Semivolatiles	ND	14	3	3	ug/L
CA58997	$8270-WMR	Dibenzofuran	CT / RSR GWPC (ug/l) / Semivolatiles	ND	47	1	1	ug/L
CA58997	$8270-WMR	Pentachlorophenol	CT / RSR GWPC (ug/l) / Semivolatiles	ND	8.5	1	1	ug/L
CA58997	$8270-WMR	Naphthalene	CT / RSR GWPC (ug/l) / Semivolatiles	1200	470	280	280	ug/L
CA58997	$8270-WMR	Bis(2-chloroethyl)ether	CT / RSR GWPC (ug/l) / Semivolatiles	ND	13	12	12	ug/L
CA58997	$8270-WMR	Benzo(k)fluoranthene	CT / RSR GWPC (ug/l) / Semivolatiles	ND	16	0.5	0.5	ug/L
CA58997	$8270-WMR	Benz(a)anthracene	CT / RSR GWPC (ug/l) / Semivolatiles	ND	16	0.06	0.06	ug/L
CA58997	$8270-WMR	Benzo(b)fluoranthene	CT / RSR GWPC (ug/l) / Semivolatiles	ND	16	0.08	0.08	ug/L
CA58997	$8270-WMR	Benzo(a)pyrene	CT / RSR GWPC (ug/l) / Semivolatiles	ND	15	0.2	0.2	ug/L
CA58997	$8270-WMR	Bis(2-chloroisopropyl)ether	CT / RSR GWPC (ug/l) / Semivolatiles	ND	13	12	12	ug/L
CA58997	$8270-WMR	1,2-Diphenylhydrazine	CT / RSR SWPC (ug/l) / APS Organics	ND	15	6	6	ug/L
CA58997	$8270-WMR	Phenanthrene	CT / RSR SWPC (ug/l) / APS Organics	ND	47	14	14	ug/L
CA58997	$8270-WMR	Naphthalene	CT / RSR SWPC (ug/l) / APS Organics	1200	470	210	210	ug/L
CA58997	$8270-WMR	2-Methylnaphthalene	CT / RSR SWPC (ug/l) / APS Organics	160	47	62	62	ug/L
CA58997	$8270-WMR	3,3'-Dichlorobenzidine	CT / RSR SWPC (ug/l) / APS Organics	ND	22	5	5	ug/L
CA58997	$8270-WMR	Benzidine	CT / RSR SWPC (ug/l) / APS Organics	ND	28	5	5	ug/L
CA58997	$8270-WMR	Indeno(1,2,3-cd)pyrene	CT / RSR SWPC (ug/l) / APS Organics	ND	16	0.54	0.54	ug/L
CA58997	$8270-WMR	4-Chloroaniline	CT / RSR SWPC (ug/l) / APS Organics	ND	19	9.9	9.9	ug/L
CA58997	$8270-WMR	Hexachlorocyclopentadiene	CT / RSR SWPC (ug/l) / APS Organics	ND	14	0.7	0.7	ug/L
CA58997	$8270-WMR	Dibenzofuran	CT / RSR SWPC (ug/l) / APS Organics	ND	47	40	40	ug/L
CA58997	$8270-WMR	1,2,4,5-Tetrachlorobenzene	CT / RSR SWPC (ug/l) / APS Organics	ND	17	11	11	ug/L
CA58997	$8270-WMR	Dibenz(a,h)anthracene	CT / RSR SWPC (ug/l) / APS Organics	ND	15	0.3	0.3	ug/L
CA58997	$8270-WMR	Chrysene	CT / RSR SWPC (ug/l) / APS Organics	ND	16	0.54	0.54	ug/L
CA58997	$8270-WMR	Dibenzofuran	CT / RSR SWPC (ug/l) / Semivolatiles	ND	47	0.077	0.077	ug/L
CA58997	$8270-WMR	Benz(a)anthracene	CT / RSR SWPC (ug/l) / Semivolatiles	ND	16	0.3	0.3	ug/L
CA58997	$8270-WMR	Benzo(b)fluoranthene	CT / RSR SWPC (ug/l) / Semivolatiles	ND	16	0.3	0.3	ug/L
CA58997	$8270-WMR	Acenaphthylene	CT / RSR SWPC (ug/l) / Semivolatiles	ND	13	0.3	0.3	ug/L
CA58997	$8270-WMR	Benzo(k)fluoranthene	CT / RSR SWPC (ug/l) / Semivolatiles	ND	16	0.3	0.3	ug/L
CA58997	$8270-WMR	Phenanthrene	CT / RSR SWPC (ug/l) / Semivolatiles	ND	47	0.077	0.077	ug/L
CA58997	$8270-WMR	Benzo(a)pyrene	CT / RSR SWPC (ug/l) / Semivolatiles	ND	15	0.3	0.3	ug/L
CA58997	$ETPH_WMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR GWPC (ug/l) / Pest/PCB/TPH	4.5	0.066	0.5	0.5	mg/L
CA58997	$ETPH_WMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR GWPC (ug/l) / Pest/PCB/TPH	4.5	0.066	0.25	0.25	mg/L
CA58997	$ETPH_WMR	Ext. Petroleum H.C. (C9-C36)	CT / RSR SWPC (ug/l) / APS Organics	4.5	0.066	0.25	0.25	mg/L
CA58997	TCN-WM	Total Cyanide	CT / RSR SWPC (ug/l) / Inorganics	0.062	0.010	0.052	0.052	mg/L
CA58998	$8260GWR	1,2-Dibromo-3-chloropropane	CT / RSR GWPC (ug/l) / APS Organics	ND	0.50	0.2	0.2	ug/L
CA58998	$8260GWR	1,2-Dibromoethane	CT / RSR GWPC (ug/l) / Volatiles	ND	0.25	0.05	0.05	ug/L
CA58999	$8260GWR	1,2-Dibromo-3-chloropropane	CT / RSR GWPC (ug/l) / APS Organics	ND	0.50	0.2	0.2	ug/L
CA58999	$8260GWR	1,2-Dibromoethane	CT / RSR GWPC (ug/l) / Volatiles	ND	0.25	0.05	0.05	ug/L

Thursday, June 07, 2018

Criteria: CT: GWP, RV, SWP

State: CT

Sample Criteria Exceedances Report

GCA58993 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CA59000	$8260GWR	1,2-Dibromo-3-chloropropane	CT / RSR GWPC (ug/l) / APS Organics	ND	0.50	0.2	0.2	ug/L
CA59000	$8260GWR	1,2-Dibromoethane	CT / RSR GWPC (ug/l) / Volatiles	ND	0.25	0.05	0.05	ug/L
CA59001	$8260GWR	1,2-Dibromo-3-chloropropane	CT / RSR GWPC (ug/l) / APS Organics	ND	0.50	0.2	0.2	ug/L
CA59001	$8260GWR	Benzene	CT / RSR GWPC (ug/l) / Volatiles	53	7.0	1	1	ug/L
CA59001	$8260GWR	1,2-Dibromoethane	CT / RSR GWPC (ug/l) / Volatiles	ND	0.25	0.05	0.05	ug/L
CA59001	$8270-CTSIMR	Phenanthrene	CT / RSR SWPC (ug/l) / Semivolatiles	0.11	0.05	0.077	0.077	ug/L
CA59001	TCN-WM	Total Cyanide	CT / RSR SWPC (ug/l) / Inorganics	0.069	0.010	0.052	0.052	mg/L
CA59002	$8260GWR	1,2-Dibromo-3-chloropropane	CT / RSR GWPC (ug/l) / APS Organics	ND	0.50	0.2	0.2	ug/L
CA59002	$8260GWR	1,2-Dibromoethane	CT / RSR GWPC (ug/l) / Volatiles	ND	0.25	0.05	0.05	ug/L
CA59002	NI-WM	Nickel	CT / RSR GWPC (ug/l) / Inorganics	0.497	0.001	0.1	0.1	mg/L
CA59003	$8260GWR	1,2-Dibromo-3-chloropropane	CT / RSR GWPC (ug/l) / APS Organics	ND	0.50	0.2	0.2	ug/L
CA59003	$8260GWR	1,2-Dibromoethane	CT / RSR GWPC (ug/l) / Volatiles	ND	0.25	0.05	0.05	ug/L
CA59003	$8270-CTSIMR	Benz(a)anthracene	CT / RSR GWPC (ug/l) / Semivolatiles	0.08	0.05	0.06	0.06	ug/L
CA59003	CR-WM	Chromium	CT / RSR GWPC (ug/l) / Inorganics	0.674	0.001	0.05	0.05	mg/L
CA59003	NI-WM	Nickel	CT / RSR GWPC (ug/l) / Inorganics	0.372	0.001	0.1	0.1	mg/L
CA59004	$8260GWR	1,2-Dibromo-3-chloropropane	CT / RSR GWPC (ug/l) / APS Organics	ND	0.50	0.2	0.2	ug/L
CA59004	$8260GWR	1,2-Dibromoethane	CT / RSR GWPC (ug/l) / Volatiles	ND	0.25	0.05	0.05	ug/L
CA59005	$8260GWR	1,2-Dibromo-3-chloropropane	CT / RSR GWPC (ug/l) / APS Organics	ND	0.50	0.2	0.2	ug/L
CA59005	$8260GWR	1,2-Dibromoethane	CT / RSR GWPC (ug/l) / Volatiles	ND	0.25	0.05	0.05	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this 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.

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

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

Project Location: ROCKVILLE MGP ***Project Number:***

Laboratory Sample ID(s): CA58993-CA59005 ***Sampling Date(s):*** 5/24/2018

List RCP Methods Used (e.g., 8260, 8270, et cetera) 6010, 7470/7471, 8260, 8270, ETPH, 9010/9012

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	***VPH and EPH methods only:*** **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 Reasonable Confidence Protocol documents acheived? See Sections: ETPH Narration, VOA Narration.**	☐ Yes ☑ No
5	**a) Were reporting limits specified or referenced on the chain-of-custody?** **b) Were these reporting limits met?**	☑ Yes ☐ No ☐ 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 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: Rashmi Makol **Position:** Project Manager

Printed Name: Rashmi Makol **Date:** Thursday, June 07, 2018

Name of Laboratory Phoenix Environmental Labs, Inc.

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

CTDEP RCP Laboratory Analysis QA/QC Certification Form - November 2007
Laboratory Quality Assurance and Quality Control Guidance Reasonable Confidence Protocols

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RCP Certification Report

June 07, 2018

SDG I.D.: GCA58993

SDG Comments

Volatile 8260 analysis:
1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane do not meet the GWP these compounds are analyzed by GC/ECD to achieve this criteria.

Sample(CA58997) required a dilution for Volatiles due to the presence of target and/or non-target compounds. This resulted in elevated reporting limits that exceed the requested criteria for one or more analytes.

Sample(CA58997) required a dilution for Semivolatiles due to a matrix interference and/or the presence of a large amount of non-target material in the sample. This resulted in elevated reporting limits that exceed the requested criteria for one or more analytes.

Cyanide Narration

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

Instrument:

LACHAT 05/29/18-1 Dustin Harrison, Greg Danielewski, Chemist 05/29/18

CA58993, CA58994

The samples were distilled in accordance with the method.
The initial calibration met criteria.

The calibration check standards (ICV,CCV) were within 15% of true value and were analyzed at a frequencey of one per ten samples.
The continuing calibration blanks (ICB,CCB) had concentrations less than the reporting level.

The method blank, laboratory control sample (LCS), and matrix spike were distilled with the samples.

LACHAT 05/31/18-1 Dustin Harrison, Greg Danielewski, Chemist 05/31/18

CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003, CA59004

The samples were distilled in accordance with the method.
The initial calibration met criteria.

The calibration check standards (ICV,CCV) were within 15% of true value and were analyzed at a frequencey of one per ten samples.
The continuing calibration blanks (ICB,CCB) had concentrations less than the reporting level.

The method blank, laboratory control sample (LCS), and matrix spike were distilled with the samples.

QC (Batch Specific):

Batch 432201 (CA52316)

CA58993, CA58994

All LCS recoveries were within 90 - 110 with the following exceptions: None.
Cyanide blank spike recovery was 104 %.
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils

QC (Site Specific):

Batch 432575 (CA58995)

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SDG I.D.: GCA58993

Cyanide Narration

CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003, CA59004

All LCS recoveries were within 90 - 110 with the following exceptions: None.
All MS recoveries were within 90 - 110 with the following exceptions: None.
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils

ETPH Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? No.

CA59001 – Poor surrogate recovery was observed. The sample was re-analyzed with similar results. A slight negative bias cannot be ruled out.

Instrument:

AU-XL2 05/31/18-1 Jeff Bucko, Chemist 05/31/18

CA58993, CA58994, CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59002, CA59003, CA59004

The initial calibration (ETPH509I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-XL2 06/04/18-1 Jeff Bucko, Chemist 06/04/18

CA59001

The initial calibration (ETPH509I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 432568 (CA59173)

CA58993, CA58994, CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003, CA59004

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.

Batch 432919 (CA60584)

CA59001

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 05/25/18 04:13 Mike Arsenault, Chemist 05/25/18

CA58993, CA58994

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

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SDG I.D.: GCA58993

Mercury Narration

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.

MERLIN 05/30/18 07:53 Rick Schweitzer, Chemist 05/30/18

CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003, CA59004

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 432054 (CA58955)

CA58993, CA58994

All LCS recoveries were within 80 - 120 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%.

QC (Site Specific):

Batch 432060 (CA58995)

CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003, CA59004

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All MS recoveries were within 75 - 125 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? Yes.

Instrument:

BLUE 05/29/18 06:35 Mike Arsenault, Chemist 05/29/18

CA58993, CA58994, CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003, CA59004

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.

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SDG I.D.: GCA58993

ICP Metals Narration

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.

BLUE 05/30/18 07:36 Mike Arsenault, Chemist 05/30/18

CA58994

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.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 432263 (CA58594)

CA58993, CA58994, CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003, CA59004

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

ICPMS Metals Narration

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

Instrument:

ICPMS 05/29/18 10:03 Cindy Pearce, Chemist 05/29/18

CA58993, CA58994, CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003

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 samples did not meet internal standard criteria: None.

ICPMS 05/30/18 14:41 Cindy Pearce, Chemist 05/30/18

CA59004

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 samples did not meet internal standard criteria: None.

QC (Batch Specific):

Batch 432187 (CA58912)

CA58993, CA58994, CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003

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

Batch 432375 (CA59645)

CA59004

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SDG I.D.: GCA58993

ICPMS Metals Narration

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

SVOA Narration

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

Instrument:

CHEM05 05/31/18-1 Matt Richard, Chemist 05/31/18

CA59000, CA59001, CA59002

Initial Calibration Verification (CHEM05/SPLIT_0514):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: 2,4-Dinitrophenol 26% (20%)
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.082 (0.1)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM05/0531_04-SPLIT_0514):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Benzoic acid 37%L (30%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.085 (0.1)
The following compounds did not meet minimum response factors: None.

CHEM05 06/01/18-1 Damien Drobinski, Chemist 06/01/18

CA58996, CA58997, CA59003, CA59004

Initial Calibration Verification (CHEM05/SPLIT_0514):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: 2,4-Dinitrophenol 26% (20%)
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.082 (0.1)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM05/0601_02-SPLIT_0514):
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: 2-Nitrophenol 0.085 (0.1)
The following compounds did not meet minimum response factors: None.

CHEM19 05/31/18-1 Damien Drobinski, Chemist 05/31/18

CA58993, CA58994, CA58995, CA58996, CA58997, CA58998, CA58999

The DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

Initial Calibration Verification (CHEM19/SPLIT_0525):
95% of target compounds met criteria.
The following compounds had %RSDs >20%: 2,4-Dinitrophenol 23% (20%), Benzidine 23% (20%), Di-n-octylphthalate 24% (20%)
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.073 (0.1), Bis(2-chloroethyl)ether 0.547 (0.7), Hexachlorobenzene 0.057 (0.1)

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SDG I.D.: GCA58993

SVOA Narration

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

Continuing Calibration Verification (CHEM19/0531_02-SPLIT_0525):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Benzoic acid 42%L (30%)
The following compounds did not meet maximum % deviations: Benzoic acid 42%L (40%)
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.079 (0.1), Bis(2-chloroethyl)ether 0.466 (0.7), Hexachlorobenzene 0.060 (0.1)
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 432382 (CA58993)

CA58993, CA58994, CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003, CA59004

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 20% 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%)

SVOASIM Narration

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

Instrument:

CHEM04 05/31/18-1 Damien Drobinski, Chemist 05/31/18

CA58993, CA58994, CA58995, CA58996, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003, CA59004

The DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

In the event that lower detection levels were requested, the samples may have been analyzed by selective ion monitoring (SIM) mode.

Initial Calibration Verification (CHEM04/SIM_0521):
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 (CHEM04/0531_02-SIM_0521):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% 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):

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SDG I.D.: GCA58993

SVOASIM Narration

Batch 432382 (CA58993)

CA58993, CA58994, CA58995, CA58996, CA58997, CA58998, CA58999, CA59000, CA59001, CA59002, CA59003, CA59004

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 20% 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%)

VOA Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? No.

QC Batch 432381 (Samples: CA58993, CA58994, CA58995, CA58996): -----

The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (Bromomethane)

The LCS and/or the LCSD recovery is below the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (2-Hexanone, 4-Methyl-2-pentanone, Acetone)

QC Batch 432677 (Samples: CA58997, CA58998, CA59003): -----

The LCS and/or the LCSD recovery is below the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (Dichlorodifluoromethane)

Instrument:

CHEM02 05/27/18-1 Michael Hahn, Chemist 05/27/18

CA59001, CA59005

Initial Calibration Verification (CHEM02/VT-P0522):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 22% (20%), Bromomethane 24% (20%)
The following compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.035 (0.05), 2-Hexanone 0.093 (0.1), Acetone 0.052 (0.1), Bromoform 0.094 (0.1), Methyl ethyl ketone 0.076 (0.1), Tetrahydrofuran (THF) 0.046 (0.05)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM02/0527P02-VT-P0522):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,2,3-Trichlorobenzene 31%L (30%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Bromoform 0.084 (0.1)
The following compounds did not meet minimum response factors: None.

CHEM02 05/29/18-2 Michael Hahn, Chemist 05/29/18

CA58997, CA58999, CA59000, CA59001, CA59002, CA59004

Initial Calibration Verification (CHEM02/VT-P0529):
96% of target compounds met criteria.

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VOA Narration

The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 21% (20%), Bromomethane 30% (20%), trans-1,4-dichloro-2-butene 23% (20%)
The following compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.035 (0.05), 2-Hexanone 0.098 (0.1), Acetone 0.052 (0.1), Bromoform 0.092 (0.1), Methyl ethyl ketone 0.080 (0.1)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM02/0529P13-VT-P0529):
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: 1,2-Dibromo-3-chloropropane 0.038 (0.05), Bromoform 0.097 (0.1)
The following compounds did not meet minimum response factors: None.

CHEM02 05/30/18-1 Harry Mullin, Chemist 05/30/18

CA58997, CA58998, CA59003

Initial Calibration Verification (CHEM02/VT-P0529):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 21% (20%), Bromomethane 30% (20%), trans-1,4-dichloro-2-butene 23% (20%)
The following compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.035 (0.05), 2-Hexanone 0.098 (0.1), Acetone 0.052 (0.1), Bromoform 0.092 (0.1), Methyl ethyl ketone 0.080 (0.1)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM02/0530P02-VT-P0529):
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: 1,2-Dibromo-3-chloropropane 0.032 (0.05), Bromoform 0.087 (0.1), Tetrahydrofuran (THF) 0.046 (0.05)
The following compounds did not meet minimum response factors: None.

CHEM17 05/25/18-1 Michael Hahn, Chemist 05/25/18

CA58993, CA58994, CA58995, CA58996

Initial Calibration Verification (CHEM17/VT-S0523):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Bromomethane 25% (20%), trans-1,4-dichloro-2-butene 27% (20%)
The following compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.041 (0.05), 2-Hexanone 0.093 (0.1), Acetone 0.053 (0.1), Methyl ethyl ketone 0.078 (0.1), Tetrahydrofuran (THF) 0.048 (0.05)
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM17/0525_02-VT-S0523):
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: 1,2-Dibromo-3-chloropropane 0.036 (0.05), Bromoform

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VOA Narration

0.095 (0.1), Tetrahydrofuran (THF) 0.041 (0.05)
The following compounds did not meet minimum response factors: None.

CHEM17 05/26/18-2 Michael Hahn, Chemist 05/26/18

CA58995

Initial Calibration Verification (CHEM17/VT-S0526):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Naphthalene 29% (20%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM17/0526_15-VT-S0526):
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.

CHEM17 05/27/18-1 Michael Hahn, Chemist 05/27/18

CA58996

Initial Calibration Verification (CHEM17/VT-S0526):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Naphthalene 29% (20%)
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM17/0527_02-VT-S0526):
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 432344 (CA59005)

CA59001, CA59005

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Batch 432347 (CA59634)

CA58996

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

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June 07, 2018

SDG I.D.: GCA58993

VOA Narration

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Batch 432353 (CA58912)

CA58995

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Batch 432381 (CA59074)

CA58993, CA58994, CA58995, CA58996

All LCS recoveries were within 70 - 130 with the following exceptions: 2-Hexanone(69%), 4-Methyl-2-pentanone(66%), Acetone(66%), Bromomethane(141%)
All LCSD recoveries were within 70 - 130 with the following exceptions: Bromomethane(134%)
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Batch 432528 (CA59920)

CA58997, CA58999, CA59000, CA59001, CA59002, CA59004

All LCS recoveries were within 70 - 130 with the following exceptions: None.
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.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Batch 432677 (CA58998)

CA58997, CA58998, CA59003

All LCS recoveries were within 70 - 130 with the following exceptions: Dichlorodifluoromethane(65%)
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.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

Temperature Narration

The samples were received at 1.3C with cooling initiated.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler: Yes ☒ No ☐
Coolant: IPK ☐ ICE ☒ No ☐
Temp 1.3 °C Pg 1 of 2

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

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

Data Delivery/Contact Options:
☐ Fax:
☐ Phone:
☒ Email: lewilley@tighebond.com

Customer: Tighe + Bond
Address: 213 COURT ST
MIDDLETOWN, CT

Project: ROCKVILLE MGP
Report to: Lynn Willey
Invoice to: TIB WESTFIELD OFFICE

Project P.O:

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 5/24/18

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

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOC	SVOC	RCP RSR Metals	ETPH	Total Cyanide	GL Amber 8 oz. w/H3PO4	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container ( ) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [X] HCl	GL Amber 1000ml [X] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [✓] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
58993	MW-1S	GW	5/24/18	10:22	✓	✓	✓	✓	✓					3	3			1	1		
58994	MW-1D			8:57	✓	✓	✓	✓	✓					3	3			1	1		
58995	MW-3S			9:00	✓	✓	✓	✓	✓					3	3			1	1		
58996	MW-7S			10:40	✓	✓	✓	✓	✓					3	3			1	1		
58997	MW-9S			15:35	✓	✓	✓	✓	✓					3	3			1	1		
58998	MW-19S			12:25	✓	✓	✓	✓	✓					3	3			1	1		
58999	MW-21S			13:50	✓	✓	✓	✓	✓					3	3			1	1		
59000	MW-10M			3:47P	✓	✓	✓	✓	✓					3	3			1	1		
59001	MW-14D			2:04P	✓	✓	✓	✓	✓					3	3			1	1		
59002	MW-14S			12:44P	✓	✓	✓	✓	✓					3	3			1	1		
59003	MW-9D			16:50	✓	✓	✓	✓	✓					3	3			1	1		
59004	MW-DUP2	↓	↓	3:48P	✓	✓	✓	✓	✓					3	3			1	1		

Relinquished by:	Accepted by:	Date:	Time:
[signature]	TRUCK	5/24/18	1759

Comments, Special Requirements or Regulations:
DAS rates

Turnaround:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☒ Standard
☐ Other
* SURCHARGE APPLIES

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☒ RCP Cert
☐ GW Protection
☒ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☒ Other RCSVC

MA
☐ MCP Certification
☐ GW-1
☐ GW-2
☐ GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: CT

Data Format
☒ Excel
☒ PDF
☐ GIS/Key
☐ EQuIS
☒ Other Geotech

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☒ Phoenix Std Report
☐ Other
* SURCHARGE APPLIES

The Connecticut Light and Power Company
d/b/a Eversource Energy
Docket No. 26-05-10
Date Issued September 29, 2026
RSR-032 Attachment 17
Page 982 of 1282

Cooler: Yes ☒ No ☐
Coolant: IPK ☐ ICE ☒ No ☐

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

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

Temp 1.3 °C Pg 2 of 2

Data Delivery/Contact Options:
☐ Fax: _____
☐ Phone: _____
☐ Email: _____

Customer: _____
Address: _____
SAME
_____

Project: _____
Report to: _____
Invoice to: SAME
_____

Project P.O: _____

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature _____ Date: 5/24/18

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

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOC	GL Amber 8 oz. w/H3PO4	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container ( ) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [X] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
59005	Blank-trip				/					3							

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	5/24/18	1150

Comments, Special Requirements or Regulations:
DAS rates

Turnaround:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☐ Standard
☐ Other
* SURCHARGE APPLIES

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
☐ MCP Certification
☐ GW-1
☐ GW-2
☐ GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

Data Format
☐ Excel
☐ PDF
☐ GIS/Key
☐ EQuIS
☐ Other

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other
* SURCHARGE APPLIES

State where samples were collected: _____

The Connecticut Light and Power Company
d/b/a Eversource Energy
Docket No. 26-05-10
Date Issued September 29, 2026
RSR-032 Attachment 17
Page 983 of 1282

PHOENIX
Environmental Laboratories, Inc.

Wednesday, June 13, 2018

Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Project ID: ROCKVILLE MGP
Sample ID#s: CA61367

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.

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

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

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

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

SDG Comments

June 13, 2018

SDG I.D.: GCA61367

Volatile 8260 analysis:
1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane do not meet GWP criteria, this compound is analyzed by GC/ECD to achieve this criteria.

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

Analysis Report

June 13, 2018

FOR: Attn: Lynn Willey
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		05/31/18	7:45
Location Code:	TIGHE-DAS	Received by:	CP	05/31/18	8:47
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	140755844B				

Laboratory Data

SDG ID: GCA61367
Phoenix ID: CA61367

Project ID: ROCKVILLE MGP
Client ID: MW-7D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Arsenic	< 0.004	0.004	mg/L	1	06/01/18	EK	SW6010C
Barium	0.299	0.002	mg/L	1	06/01/18	EK	SW6010C
Beryllium	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Cadmium	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Chromium	0.002	0.001	mg/L	1	06/01/18	EK	SW6010C
Copper	< 0.005	0.005	mg/L	1	06/01/18	EK	SW6010C
Mercury	< 0.0002	0.0002	mg/L	1	06/01/18	RS	SW7470A
Nickel	< 0.001	0.001	mg/L	1	06/01/18	EK	SW6010C
Lead	< 0.002	0.002	mg/L	1	06/01/18	EK	SW6010C
Antimony	< 0.005	0.005	mg/L	1	06/01/18	EK	SW6010C
Selenium	< 0.010	0.010	mg/L	1	06/01/18	EK	SW6010C
Thallium	< 0.0005	0.0005	mg/L	5	06/01/18	CPP	SW6020B
Vanadium	0.002	0.002	mg/L	1	06/01/18	EK	SW6010C
Zinc	0.003	0.002	mg/L	1	06/01/18	EK	SW6010C
Total Cyanide	< 0.010	0.010	mg/L	1	06/05/18	O/GD	SW9010C/SW9012B
Extraction of CT ETPH	Completed				06/04/18	P/D	SW3510C/SW3520C
Mercury Digestion	Completed				06/01/18	Q/I/I	SW7470A
Semi-Volatile Extraction	Completed				06/04/18	P/D/D	SW3520C
Total Metals Digestion	Completed				05/31/18	AG	
Total Metals Digestion MS	Completed				05/31/18	AG	
TPH by GC (Extractable Products)							
Ext. Petroleum H.C. (C9-C36)	ND	0.067	mg/L	1	06/05/18	JRB	CTETPH 8015D
Identification	ND		mg/L	1	06/05/18	JRB	CTETPH 8015D
QA/QC Surrogates							
% n-Pentacosane	55		%	1	06/05/18	JRB	50 - 150 %

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-7D

Phoenix I.D.: CA61367

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	06/04/18	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	06/04/18	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	06/04/18	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
2-Isopropyltoluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
Acetone	ND	25	ug/L	1	06/04/18	MH	SW8260C
Acrylonitrile	ND	0.50	ug/L	1	06/04/18	MH	SW8260C
Benzene	ND	0.70	ug/L	1	06/04/18	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	06/04/18	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	06/04/18	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	06/04/18	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	06/04/18	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-7D

Phoenix I.D.: CA61367

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
m&p-Xylene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Styrene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	06/04/18	MH	SW8260C
Toluene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Total Xylenes	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	06/04/18	MH	SW8260C
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	06/04/18	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	06/04/18	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	97		%	1	06/04/18	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	06/04/18	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	06/04/18	MH	70 - 130 %
% Toluene-d8	95		%	1	06/04/18	MH	70 - 130 %
Semivolatiles							
1,2,4-Trichlorobenzene	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
1,2-Dichlorobenzene	ND	2.4	ug/L	1	06/07/18	DD	SW8270D
1,2-Diphenylhydrazine	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
1,3-Dichlorobenzene	ND	2.4	ug/L	1	06/07/18	DD	SW8270D
1,4-Dichlorobenzene	ND	2.4	ug/L	1	06/07/18	DD	SW8270D
2,4,5-Trichlorophenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
2,4,6-Trichlorophenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
2,4-Dichlorophenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
2,4-Dimethylphenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
2,4-Dinitrophenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
2,4-Dinitrotoluene	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
2,6-Dinitrotoluene	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
2-Chloronaphthalene	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
2-Chlorophenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
2-Methylphenol (o-cresol)	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
2-Nitroaniline	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
2-Nitrophenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	9.4	ug/L	1	06/07/18	DD	SW8270D
3,3'-Dichlorobenzidine	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
3-Nitroaniline	ND	4.7	ug/L	1	06/07/18	DD	SW8270D

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-7D

Phoenix I.D.: CA61367

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4,6-Dinitro-2-methylphenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
4-Bromophenyl phenyl ether	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
4-Chloro-3-methylphenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
4-Chloroaniline	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
4-Chlorophenyl phenyl ether	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
4-Nitroaniline	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
4-Nitrophenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
Acetophenone	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Aniline	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Benzidine	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Benzoic acid	ND	47	ug/L	1	06/07/18	DD	SW8270D
Benzyl butyl phthalate	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Bis(2-chloroethoxy)methane	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Bis(2-chloroethyl)ether	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
Bis(2-chloroisopropyl)ether	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Carbazole	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Diethyl phthalate	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Dimethylphthalate	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Di-n-butylphthalate	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Di-n-octylphthalate	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Isophorone	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
N-Nitrosodimethylamine	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
N-Nitrosodi-n-propylamine	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
N-Nitrosodiphenylamine	ND	4.7	ug/L	1	06/07/18	DD	SW8270D
Phenol	ND	0.94	ug/L	1	06/07/18	DD	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	85		%	1	06/07/18	DD	15 - 110 %
% 2-Fluorobiphenyl	72		%	1	06/07/18	DD	30 - 130 %
% 2-Fluorophenol	54		%	1	06/07/18	DD	15 - 110 %
% Nitrobenzene-d5	76		%	1	06/07/18	DD	30 - 130 %
% Phenol-d5	60		%	1	06/07/18	DD	15 - 110 %
% Terphenyl-d14	74		%	1	06/07/18	DD	30 - 130 %
Semivolatiles (SIM)							
1,2,4,5-Tetrachlorobenzene	ND	0.47	ug/L	1	06/06/18	DD	SW8270D (SIM)
2-Methylnaphthalene	ND	0.94	ug/L	1	06/06/18	DD	SW8270D (SIM)
Acenaphthene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Acenaphthylene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Anthracene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Benz(a)anthracene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Benzo(a)pyrene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.19	ug/L	1	06/06/18	DD	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Bis(2-ethylhexyl)phthalate	ND	0.47	ug/L	1	06/06/18	DD	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.01	ug/L	1	06/06/18	DD	SW8270D (SIM)
Dibenzofuran	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Fluoranthene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	06/06/18	DD	SW8270D (SIM)

Ver 1

Project ID: ROCKVILLE MGP
Client ID: MW-7D

Phoenix I.D.: CA61367

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Hexachlorobenzene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Hexachlorobutadiene	ND	0.47	ug/L	1	06/06/18	DD	SW8270D (SIM)
Hexachlorocyclopentadiene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Hexachloroethane	ND	0.47	ug/L	1	06/06/18	DD	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Naphthalene	ND	0.09	ug/L	1	06/06/18	DD	SW8270D (SIM)
Nitrobenzene	ND	0.09	ug/L	1	06/06/18	DD	SW8270D (SIM)
Pentachloronitrobenzene	ND	0.09	ug/L	1	06/06/18	DD	SW8270D (SIM)
Pentachlorophenol	ND	0.75	ug/L	1	06/06/18	DD	SW8270D (SIM)
Phenanthrene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Pyrene	ND	0.05	ug/L	1	06/06/18	DD	SW8270D (SIM)
Pyridine	ND	0.47	ug/L	1	06/06/18	DD	SW8270D (SIM)
QA/QC Surrogates							
% 2,4,6-Tribromophenol	73		%	1	06/06/18	DD	15 - 110 %
% 2-Fluorobiphenyl	63		%	1	06/06/18	DD	30 - 130 %
% 2-Fluorophenol	56		%	1	06/06/18	DD	15 - 110 %
% Nitrobenzene-d5	92		%	1	06/06/18	DD	30 - 130 %
% Phenol-d5	74		%	1	06/06/18	DD	15 - 110 %
% Terphenyl-d14	72		%	1	06/06/18	DD	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:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Volatile Comment:
Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director
June 13, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

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QA/QC Report

June 13, 2018

QA/QC Data

SDG I.D.: GCA61367

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 432747 (mg/L), QC Sample No: CA61339 5X (CA61367)													
ICP MS Metals - Aqueous													
Thallium	BRL	0.0005	<0.0005	<0.0005	NC	98.2			100			75 - 125	20
QA/QC Batch 432732 (mg/L), QC Sample No: CA61539 (CA61367)													
ICP Metals - Aqueous													
Antimony	BRL	0.005	<0.005	<0.005	NC	113			111			75 - 125	20
Arsenic	BRL	0.004	<0.004	<0.004	NC	103			102			75 - 125	20
Barium	BRL	0.002	0.033	0.032	3.10	106			104			75 - 125	20
Beryllium	BRL	0.001	<0.001	<0.001	NC	105			103			75 - 125	20
Cadmium	BRL	0.001	<0.001	<0.001	NC	110			103			75 - 125	20
Chromium	BRL	0.001	<0.001	<0.001	NC	106			101			75 - 125	20
Copper	BRL	0.005	<0.005	<0.005	NC	103			102			75 - 125	20
Lead	BRL	0.002	<0.002	<0.002	NC	107			102			75 - 125	20
Nickel	BRL	0.001	<0.001	<0.001	NC	110			104			75 - 125	20
Selenium	BRL	0.010	<0.010	<0.010	NC	103			99.4			75 - 125	20
Silver	BRL	0.001	<0.001	<0.001	NC	102			99.6			75 - 125	20
Vanadium	BRL	0.002	<0.002	<0.002	NC	104			101			75 - 125	20
Zinc	BRL	0.002	<0.002	<0.002	NC	107			103			75 - 125	20
QA/QC Batch 432816 (mg/L), QC Sample No: CA61704 (CA61367)													
Mercury - Water	BRL	0.0002	<0.0002	<0.0002	NC	82.3			95.1			80 - 120	20

Comment:

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 70-130%. MS acceptance range is 75-125%.

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QA/QC Report

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QA/QC Data

SDG I.D.: GCA61367

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 433119 (mg/L), QC Sample No: CA61339 (CA61367)													
Total Cyanide	BRL	0.010	<0.010	<0.010	NC	92.5			103			90 - 110	20
Comment:													
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils													

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QA/QC Report

June 13, 2018

QA/QC Data

SDG I.D.: GCA61367

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 433110 (mg/L), QC Sample No: CA61339 (CA61367)										
TPH by GC (Extractable Products) - Ground Water										
Ext. Petroleum H.C. (C9-C36)	ND	0.10	80	78	2.5				60 - 120	30
% n-Pentacosane	68	%	74	68	8.5				50 - 150	20
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 433254 (ug/L), QC Sample No: CA61344 (CA61367)										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	101	97	4.0				70 - 130	30
1,1,1-Trichloroethane	ND	1.0	98	95	3.1				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	101	92	9.3				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	101	86	16.0				70 - 130	30
1,1-Dichloroethane	ND	1.0	96	92	4.3				70 - 130	30
1,1-Dichloroethene	ND	1.0	106	106	0.0				70 - 130	30
1,1-Dichloropropene	ND	1.0	100	99	1.0				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	98	94	4.2				70 - 130	30
1,2,3-Trichloropropane	ND	1.0	97	89	8.6				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	101	96	5.1				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	99	100	1.0				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	99	85	15.2				70 - 130	30
1,2-Dibromoethane	ND	1.0	102	95	7.1				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	101	97	4.0				70 - 130	30
1,2-Dichloroethane	ND	1.0	96	85	12.2				70 - 130	30
1,2-Dichloropropane	ND	1.0	100	93	7.3				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	98	100	2.0				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	100	98	2.0				70 - 130	30
1,3-Dichloropropane	ND	1.0	99	90	9.5				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	99	97	2.0				70 - 130	30
2,2-Dichloropropane	ND	1.0	99	91	8.4				70 - 130	30
2-Chlorotoluene	ND	1.0	100	101	1.0				70 - 130	30
2-Hexanone	ND	5.0	80	70	13.3				70 - 130	30
2-Isopropyltoluene	ND	1.0	98	99	1.0				70 - 130	30
4-Chlorotoluene	ND	1.0	98	99	1.0				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	87	70	21.7				70 - 130	30
Acetone	ND	5.0	55	55	0.0				70 - 130	30
Acrylonitrile	ND	5.0	90	77	15.6				70 - 130	30
Benzene	ND	0.70	99	95	4.1				70 - 130	30
Bromobenzene	ND	1.0	101	100	1.0				70 - 130	30
Bromochloromethane	ND	1.0	100	87	13.9				70 - 130	30
Bromodichloromethane	ND	0.50	102	92	10.3				70 - 130	30
Bromoform	ND	1.0	106	92	14.1				70 - 130	30
Bromomethane	ND	1.0	106	106	0.0				70 - 130	30

QA/QC Data

SDG I.D.: GCA61367

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Carbon Disulfide	ND	1.0	99	100	1.0				70 - 130	30	
Carbon tetrachloride	ND	1.0	103	100	3.0				70 - 130	30	
Chlorobenzene	ND	1.0	99	97	2.0				70 - 130	30	
Chloroethane	ND	1.0	98	97	1.0				70 - 130	30	
Chloroform	ND	1.0	94	87	7.7				70 - 130	30	
Chloromethane	ND	1.0	102	100	2.0				70 - 130	30	
cis-1,2-Dichloroethene	ND	1.0	99	94	5.2				70 - 130	30	
cis-1,3-Dichloropropene	ND	0.40	101	89	12.6				70 - 130	30	
Dibromochloromethane	ND	0.50	108	100	7.7				70 - 130	30	
Dibromomethane	ND	1.0	101	87	14.9				70 - 130	30	
Dichlorodifluoromethane	ND	1.0	130	136	4.5				70 - 130	30	I
Ethylbenzene	ND	1.0	102	101	1.0				70 - 130	30	
Hexachlorobutadiene	ND	0.40	108	113	4.5				70 - 130	30	
Isopropylbenzene	ND	1.0	99	103	4.0				70 - 130	30	
m&p-Xylene	ND	1.0	100	97	3.0				70 - 130	30	
Methyl ethyl ketone	ND	5.0	71	59	18.5				70 - 130	30	I
Methyl t-butyl ether (MTBE)	ND	1.0	98	76	25.3				70 - 130	30	
Methylene chloride	ND	1.0	91	105	14.3				70 - 130	30	
Naphthalene	ND	1.0	99	94	5.2				70 - 130	30	
n-Butylbenzene	ND	1.0	100	97	3.0				70 - 130	30	
n-Propylbenzene	ND	1.0	100	100	0.0				70 - 130	30	
o-Xylene	ND	1.0	102	98	4.0				70 - 130	30	
p-Isopropyltoluene	ND	1.0	99	99	0.0				70 - 130	30	
sec-Butylbenzene	ND	1.0	102	100	2.0				70 - 130	30	
Styrene	ND	1.0	101	97	4.0				70 - 130	30	
tert-Butylbenzene	ND	1.0	98	99	1.0				70 - 130	30	
Tetrachloroethene	ND	1.0	104	98	5.9				70 - 130	30	
Tetrahydrofuran (THF)	ND	2.5	84	69	19.6				70 - 130	30	I
Toluene	ND	1.0	104	97	7.0				70 - 130	30	
trans-1,2-Dichloroethene	ND	1.0	102	100	2.0				70 - 130	30	
trans-1,3-Dichloropropene	ND	0.40	97	82	16.8				70 - 130	30	
trans-1,4-dichloro-2-butene	ND	5.0	102	93	9.2				70 - 130	30	
Trichloroethene	ND	1.0	99	98	1.0				70 - 130	30	
Trichlorofluoromethane	ND	1.0	103	104	1.0				70 - 130	30	
Trichlorotrifluoroethane	ND	1.0	114	115	0.9				70 - 130	30	
Vinyl chloride	ND	1.0	110	112	1.8				70 - 130	30	
% 1,2-dichlorobenzene-d4	98	%	100	97	3.0				70 - 130	30	
% Bromofluorobenzene	96	%	98	94	4.2				70 - 130	30	
% Dibromofluoromethane	99	%	101	91	10.4				70 - 130	30	
% Toluene-d8	93	%	101	99	2.0				70 - 130	30	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.

QA/QC Batch 433113 (ug/L), QC Sample No: CA63410 (CA61367)

Semivolatiles (SIM) - Ground Water

1,2,4,5-Tetrachlorobenzene	ND	0.50	64	67	4.6				30 - 130	20	
2-Methylnaphthalene	ND	0.02	66	66	0.0				30 - 130	20	
Acenaphthene	ND	0.02	65	60	8.0				30 - 130	20	
Acenaphthylene	ND	0.02	61	61	0.0				30 - 130	20	
Anthracene	ND	0.02	73	70	4.2				30 - 130	20	
Benz(a)anthracene	ND	0.02	74	75	1.3				30 - 130	20	
Benzo(a)pyrene	ND	0.02	65	42	43.0				30 - 130	20	r

QA/QC Data

SDG I.D.: GCA61367

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzo(b)fluoranthene	ND	0.02	65	60	8.0				30 - 130	20	
Benzo(ghi)perylene	ND	0.02	60	50	18.2				30 - 130	20	
Benzo(k)fluoranthene	ND	0.02	81	74	9.0				30 - 130	20	
Bis(2-ethylhexyl)phthalate	ND	0.10	85	92	7.9				30 - 130	20	
Chrysene	ND	0.02	72	63	13.3				30 - 130	20	
Dibenz(a,h)anthracene	ND	0.01	62	61	1.6				30 - 130	20	
Dibenzofuran	ND	0.05	64	64	0.0				30 - 130	20	
Fluoranthene	ND	0.02	68	72	5.7				30 - 130	20	
Fluorene	ND	0.02	67	67	0.0				30 - 130	20	
Hexachlorobenzene	ND	0.02	77	83	7.5				30 - 130	20	
Hexachlorobutadiene	ND	0.05	57	62	8.4				30 - 130	20	
Hexachlorocyclopentadiene	ND	0.05	35	43	20.5				30 - 130	20	
Hexachloroethane	ND	0.05	50	53	5.8				30 - 130	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	61	55	10.3				30 - 130	20	
Naphthalene	ND	0.02	58	61	5.0				30 - 130	20	
Nitrobenzene	ND	0.05	62	66	6.3				30 - 130	20	
Pentachloronitrobenzene	ND	0.10	77	89	14.5				30 - 130	20	
Pentachlorophenol	ND	0.20	96	114	17.1				30 - 130	20	
Phenanthrene	ND	0.02	72	71	1.4				30 - 130	20	
Pyrene	ND	0.02	68	56	19.4				30 - 130	20	
Pyridine	ND	0.50	43	43	0.0				30 - 130	20	
% 2,4,6-Tribromophenol	78	%	79	94	17.3				15 - 110	20	
% 2-Fluorobiphenyl	61	%	63	64	1.6				30 - 130	20	
% 2-Fluorophenol	53	%	44	45	2.2				15 - 110	20	
% Nitrobenzene-d5	66	%	55	62	12.0				30 - 130	20	
% Phenol-d5	63	%	43	24	56.7				15 - 110	20	r
% Terphenyl-d14	76	%	75	79	5.2				30 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

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%)

QA/QC Batch 433113 (ug/L), QC Sample No: CA63410 (CA61367)

Semivolatiles - Ground Water

1,2,4-Trichlorobenzene	ND	3.5	63	69	9.1				30 - 130	20	
1,2-Dichlorobenzene	ND	1.0	59	57	3.4				30 - 130	20	
1,2-Diphenylhydrazine	ND	1.6	81	33	84.2				30 - 130	20	r
1,3-Dichlorobenzene	ND	1.0	56	53	5.5				30 - 130	20	
1,4-Dichlorobenzene	ND	1.0	57	58	1.7				30 - 130	20	
2,4,5-Trichlorophenol	ND	1.0	76	79	3.9				30 - 130	20	
2,4,6-Trichlorophenol	ND	1.0	72	74	2.7				30 - 130	20	
2,4-Dichlorophenol	ND	1.0	68	75	9.8				30 - 130	20	
2,4-Dimethylphenol	ND	1.0	76	80	5.1				30 - 130	20	
2,4-Dinitrophenol	ND	1.0	75	80	6.5				30 - 130	20	
2,4-Dinitrotoluene	ND	3.5	87	84	3.5				30 - 130	20	
2,6-Dinitrotoluene	ND	3.5	78	82	5.0				30 - 130	20	
2-Chloronaphthalene	ND	3.5	70	69	1.4				30 - 130	20	
2-Chlorophenol	ND	1.0	53	56	5.5				30 - 130	20	
2-Methylphenol (o-cresol)	ND	1.0	64	61	4.8				30 - 130	20	
2-Nitroaniline	ND	3.5	128	128	0.0				30 - 130	20	
2-Nitrophenol	ND	1.0	74	78	5.3				30 - 130	20	
3&4-Methylphenol (m&p-cresol)	ND	1.0	66	67	1.5				30 - 130	20	
3,3'-Dichlorobenzidine	ND	5.0	82	82	0.0				30 - 130	20	

QA/QC Data

SDG I.D.: GCA61367

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
3-Nitroaniline	ND	5.0	97	97	0.0				30 - 130	20	
4,6-Dinitro-2-methylphenol	ND	1.0	81	82	1.2				30 - 130	20	
4-Bromophenyl phenyl ether	ND	3.5	76	77	1.3				30 - 130	20	
4-Chloro-3-methylphenol	ND	1.0	82	93	12.6				30 - 130	20	
4-Chloroaniline	ND	3.5	82	82	0.0				30 - 130	20	
4-Chlorophenyl phenyl ether	ND	1.0	73	73	0.0				30 - 130	20	
4-Nitroaniline	ND	5.0	85	80	6.1				30 - 130	20	
4-Nitrophenol	ND	1.0	87	87	0.0				15 - 130	20	
Acetophenone	ND	3.5	68	69	1.5				30 - 130	20	
Aniline	ND	3.5	63	63	0.0				30 - 130	20	
Benzidine	ND	4.5	36	36	0.0				30 - 130	20	
Benzoic acid	ND	10	59	92	43.7				30 - 130	20	r
Benzyl butyl phthalate	ND	1.5	83	24	110.3				30 - 130	20	l,r
Bis(2-chloroethoxy)methane	ND	3.5	66	66	0.0				30 - 130	20	
Bis(2-chloroethyl)ether	ND	1.0	51	53	3.8				30 - 130	20	
Bis(2-chloroisopropyl)ether	ND	1.0	46	50	8.3				30 - 130	20	
Carbazole	ND	5.0	85	85	0.0				30 - 130	20	
Diethyl phthalate	ND	1.5	80	78	2.5				30 - 130	20	
Dimethylphthalate	ND	1.5	80	75	6.5				30 - 130	20	
Di-n-butylphthalate	ND	1.5	83	80	3.7				30 - 130	20	
Di-n-octylphthalate	ND	1.5	84	82	2.4				30 - 130	20	
Isophorone	ND	3.5	70	76	8.2				30 - 130	20	
N-Nitrosodimethylamine	ND	1.0	46	50	8.3				30 - 130	20	
N-Nitrosodi-n-propylamine	ND	3.5	73	78	6.6				30 - 130	20	
N-Nitrosodiphenylamine	ND	3.5	71	56	23.6				30 - 130	20	r
Phenol	ND	1.0	53	50	5.8				15 - 130	20	
% 2,4,6-Tribromophenol	80	%	87	86	1.2				15 - 110	20	
% 2-Fluorobiphenyl	63	%	67	66	1.5				30 - 130	20	
% 2-Fluorophenol	42	%	42	42	0.0				15 - 110	20	
% Nitrobenzene-d5	63	%	67	67	0.0				30 - 130	20	
% Phenol-d5	53	%	48	23	70.4				15 - 110	20	r
% Terphenyl-d14	75	%	82	83	1.2				30 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

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%)

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
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
June 13, 2018

Wednesday, June 13, 2018

Criteria: CT: GWP, RV, SWP

State: CT

Sample Criteria Exceedances Report

GCA61367 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CA61367	$8260GWR	1,2-Dibromo-3-chloropropane	CT / RSR GWPC (ug/l) / APS Organics	ND	1.0	0.2	0.2	ug/L
CA61367	$8260GWR	1,2-Dibromoethane	CT / RSR GWPC (ug/l) / Volatiles	ND	0.25	0.05	0.05	ug/L

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.

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

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

Project Location: ROCKVILLE MGP ***Project Number:***

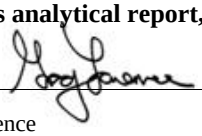
Laboratory Sample ID(s): CA61367 ***Sampling Date(s):*** 5/31/2018

List RCP Methods Used (e.g., 8260, 8270, et cetera) 6010, 7470/7471, 8260, 8270, ETPH, 9010/9012

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	***VPH and EPH methods only:*** **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 Reasonable Confidence Protocol documents acheived? See Sections: SVOA Narration, SVOASIM Narration, VOA Narration.**	☐ Yes ☑ No
5	**a) Were reporting limits specified or referenced on the chain-of-custody?** **b) Were these reporting limits met?**	☑ Yes ☐ No ☐ 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 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:** Wednesday, June 13, 2018

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

June 13, 2018

SDG I.D.: GCA61367

SDG Comments

Volatile 8260 analysis:
1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane do not meet the GWP these compounds are analyzed by GC/ECD to achieve this criteria.

Cyanide Narration

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

Instrument:

LACHAT 06/05/18-1 Dustin Harrison, Greg Danielewski, Chemist 06/05/18

CA61367

The samples were distilled in accordance with the method.
The initial calibration met criteria.

The calibration check standards (ICV,CCV) were within 15% of true value and were analyzed at a frequencey of one per ten samples.
The continuing calibration blanks (ICB,CCB) had concentrations less than the reporting level.

The method blank, laboratory control sample (LCS), and matrix spike were distilled with the samples.

QC (Batch Specific):

Batch 433119 (CA61339)

CA61367

All LCS recoveries were within 90 - 110 with the following exceptions: None.
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils

ETPH Narration

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

Instrument:

AU-FID84 06/05/18-1 Jeff Bucko, Chemist 06/05/18

CA61367

The initial calibration (ETPH525I) RSD for the compound list was less than 30% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 433110 (CA61339)

CA61367

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.

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Certification Report

June 13, 2018

SDG I.D.: GCA61367

Mercury Narration

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

Instrument:

MERLIN 06/01/18 07:48 Rick Schweitzer, Chemist 06/01/18

CA61367

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 432816 (CA61704)

CA61367

All LCS recoveries were within 80 - 120 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? Yes.

Instrument:

BLUE 06/01/18 07:05 Emily Kolominskaya, Chemist 06/01/18

CA61367

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.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 432732 (CA61539)

CA61367

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

ICPMS Metals Narration

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