ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

Report Date: May 02, 2016

Project: MH8 Sampling/Characterization

Submittal Date: 03/30/2016
Group Number: 1645616
PO Number: MH8 SAMPLING
State of Sample Origin: PA

Client Sample Description	Lancaster Labs (LL) #
MH8-1-20160329(3') Grab Soil	8310251
MH8-2-20160329(3') Grab Soil	8310252
MH8-3-20160329(3') Grab Soil	8310253
MH8-4-20160329(3') Grab Soil	8310254
MH8-5-20160329(3') Grab Soil	8310255
MH8-6-20160329(3') Grab Soil	8310256
MH8-7-20160329(3') Grab Soil	8310257
MH8-8-20160329(2') Grab Soil	8310258
MH8-9-20160330(2') Grab Soil	8310259
MH8-10-20160330(2') Grab Soil	8310260
MH8-11-20160330(2') Grab Soil	8310261
MH8-12-20160330(2') Grab Soil	8310262
MH8-13-20160330(2') Grab Soil	8310263
MH8-14-20160330(2') Grab Soil	8310264
MH8-15-20160330(2') Grab Soil	8310265
MH8-16-20160330(2') Grab Soil	8310266
MH8-17-20160330(0-1') Grab Soil	8310267
MH8-17-20160330(2-3') Grab Soil	8310268
TB-20160330 Water	8310269

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

Electronic Copy To Stantec Attn: Mark Schaeffer

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252

Sample Description: MH8-1-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310251
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 11:30 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

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1060 Andrew Drive
Suite 140
West Chester PA 19380

MH801

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Benzene	71-43-2	11		0.11	177.44
10237	sec-Butylbenzene	135-98-8	2.8		0.21	177.44
10237	tert-Butylbenzene	98-06-6	0.29	J	0.21	177.44
10237	Cyclohexane	110-82-7	4.7		0.21	177.44
10237	1,2-Dibromoethane	106-93-4	N.D.		0.21	177.44
10237	1,2-Dichloroethane	107-06-2	N.D.		0.21	177.44
10237	Ethylbenzene	100-41-4	240		2.1	1774.38
10237	n-Hexane	110-54-3	5.5		0.21	177.44
10237	Isopropylbenzene	98-82-8	6.0		0.21	177.44
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.11	177.44
10237	Naphthalene	91-20-3	19		0.21	177.44
10237	Toluene	108-88-3	9.2		0.21	177.44
10237	1,2,4-Trimethylbenzene	95-63-6	55		0.21	177.44
10237	1,3,5-Trimethylbenzene	108-67-8	21		0.21	177.44
10237	Xylene (Total)	1330-20-7	1,200		2.1	1774.38
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	2.3		0.039	10
10728	Anthracene	120-12-7	0.89		0.039	10
10728	Benzo(a)anthracene	56-55-3	0.18	J	0.039	10
10728	Benzo(a)pyrene	50-32-8	0.10	J	0.039	10
10728	Benzo(b)fluoranthene	205-99-2	0.076	J	0.039	10
10728	Benzo(g,h,i)perylene	191-24-2	0.075	J	0.039	10
10728	Benzo(k)fluoranthene	207-08-9	0.040	J	0.039	10
10728	1,1'-Biphenyl	92-52-4	2.1		0.20	10
10728	Di-n-butylphthalate	84-74-2	N.D.		0.79	10
10728	Chrysene	218-01-9	0.33		0.039	10
10728	Dibenz(a,h)anthracene	53-70-3	N.D.		0.039	10
10728	Diethylphthalate	84-66-2	N.D.		0.79	10
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.20	10
10728	2,4-Dinitrophenol	51-28-5	N.D.		3.6	10
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		0.79	10
10728	Fluoranthene	206-44-0	0.21		0.039	10
10728	Fluorene	86-73-7	4.1		0.039	10
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.039	10
10728	2-Methylnaphthalene	91-57-6	74		0.20	50
10728	2-Methylphenol	95-48-7	N.D.		0.20	10
10728	4-Methylphenol	106-44-5	N.D.		0.20	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10728	4-Nitrophenol	100-02-7	N.D.		2.0	10
10728	Phenanthrene	85-01-8	10		0.039	10
10728	Phenol	108-95-2	N.D.		0.20	10
10728	Pyrene	129-00-0	1.0		0.039	10
10728	Pyridine	110-86-1	N.D.		0.79	10
10728	Quinoline	91-22-5	N.D.		0.39	10
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	6.54		0.0719	1
06955	Lead	7439-92-1	10.1		0.364	1

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Analysis Report

Sample Description: MH8-1-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310251
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 11:30 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

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1060 Andrew Drive
Suite 140
West Chester PA 19380

MH801

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06961	Nickel	7440-02-0	15.5	0.204	1
06971	Vanadium	7440-62-2	29.3	0.204	1
06972	Zinc	7440-66-6	40.3	0.683	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	15.9	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161001AA	04/09/2016 09:44	Anita M Dale	177.44
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161001AA	04/09/2016 10:07	Anita M Dale	1774.38
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140637	03/29/2016 11:30	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140637	03/29/2016 11:30	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140637	03/29/2016 11:30	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/08/2016 19:12	Catherine E Bachman	10
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/08/2016 19:38	Catherine E Bachman	50
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160965708007	04/08/2016 05:13	Matthew Machtinger	1
06955	Lead	SW-846 6010B	1	160965708007	04/08/2016 05:13	Matthew Machtinger	1
06961	Nickel	SW-846 6010B	1	160965708007	04/08/2016 05:13	Matthew Machtinger	1
06971	Vanadium	SW-846 6010B	1	160965708007	04/08/2016 05:13	Matthew Machtinger	1
06972	Zinc	SW-846 6010B	1	160965708007	04/08/2016 05:13	Matthew Machtinger	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160965708007	04/06/2016 09:30	Christopher M Klumpp	1

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Analysis Report

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Sample Description: MH8-1-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310251
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 11:30 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

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Suite 140
West Chester PA 19380

MH801

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00111	Moisture	SM 2540 G-1997	1	16095820005B	04/04/2016 21:04	Scott W Freisher	1

Sample Description: MH8-2-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310252
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 11:45 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

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1060 Andrew Drive
Suite 140
West Chester PA 19380

MH802

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Benzene	71-43-2	26		0.28	484.66
10237	sec-Butylbenzene	135-98-8	7.5		0.55	484.66
10237	tert-Butylbenzene	98-06-6	0.79	J	0.55	484.66
10237	Cyclohexane	110-82-7	19		0.55	484.66
10237	1,2-Dibromoethane	106-93-4	N.D.		0.55	484.66
10237	1,2-Dichloroethane	107-06-2	N.D.		0.55	484.66
10237	Ethylbenzene	100-41-4	520		11	9693.22
10237	n-Hexane	110-54-3	33		0.55	484.66
10237	Isopropylbenzene	98-82-8	15		0.55	484.66
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.28	484.66
10237	Naphthalene	91-20-3	49		0.55	484.66
10237	Toluene	108-88-3	10		0.55	484.66
10237	1,2,4-Trimethylbenzene	95-63-6	140		0.55	484.66
10237	1,3,5-Trimethylbenzene	108-67-8	49		0.55	484.66
10237	Xylene (Total)	1330-20-7	2,400		11	9693.22
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	4.2		0.038	10
10728	Anthracene	120-12-7	1.7		0.038	10
10728	Benzo(a)anthracene	56-55-3	0.26		0.038	10
10728	Benzo(a)pyrene	50-32-8	0.15	J	0.038	10
10728	Benzo(b)fluoranthene	205-99-2	0.099	J	0.038	10
10728	Benzo(g,h,i)perylene	191-24-2	0.087	J	0.038	10
10728	Benzo(k)fluoranthene	207-08-9	0.046	J	0.038	10
10728	1,1'-Biphenyl	92-52-4	3.4		0.19	10
10728	Di-n-butylphthalate	84-74-2	N.D.		0.76	10
10728	Chrysene	218-01-9	0.61		0.038	10
10728	Dibenz(a,h)anthracene	53-70-3	N.D.		0.038	10
10728	Diethylphthalate	84-66-2	N.D.		0.76	10
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.19	10
10728	2,4-Dinitrophenol	51-28-5	N.D.		3.4	10
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		0.76	10
10728	Fluoranthene	206-44-0	0.38		0.038	10
10728	Fluorene	86-73-7	7.3		0.038	10
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.038	10
10728	2-Methylnaphthalene	91-57-6	140		0.19	50
10728	2-Methylphenol	95-48-7	N.D.		0.19	10
10728	4-Methylphenol	106-44-5	N.D.		0.19	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10728	4-Nitrophenol	100-02-7	N.D.		1.9	10
10728	Phenanthrene	85-01-8	18		0.038	10
10728	Phenol	108-95-2	N.D.		0.19	10
10728	Pyrene	129-00-0	1.8		0.038	10
10728	Pyridine	110-86-1	N.D.		0.76	10
10728	Quinoline	91-22-5	N.D.		0.38	10
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	5.06		0.0726	1
06955	Lead	7439-92-1	11.5		0.368	1

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Analysis Report

Sample Description: MH8-2-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310252
LL Group # 1645616
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Project Name: MH8 Sampling/Characterization

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MH802

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06961	Nickel	7440-02-0	9.78	0.206	1
06971	Vanadium	7440-62-2	15.4	0.206	1
06972	Zinc	7440-66-6	23.7	0.691	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	12.2	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161001AA	04/09/2016 10:30	Anita M Dale	484.66
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161002AA	04/10/2016 01:35	Anita M Dale	9693.22
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140637	03/29/2016 11:45	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140637	03/29/2016 11:45	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140637	03/29/2016 11:45	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/08/2016 20:03	Catherine E Bachman	10
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/08/2016 20:29	Catherine E Bachman	50
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160965708007	04/08/2016 05:17	Matthew Machtinger	1
06955	Lead	SW-846 6010B	1	160965708007	04/08/2016 05:17	Matthew Machtinger	1
06961	Nickel	SW-846 6010B	1	160965708007	04/08/2016 05:17	Matthew Machtinger	1
06971	Vanadium	SW-846 6010B	1	160965708007	04/08/2016 05:17	Matthew Machtinger	1
06972	Zinc	SW-846 6010B	1	160965708007	04/08/2016 05:17	Matthew Machtinger	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160965708007	04/06/2016 09:30	Christopher M Klumpp	1

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Analysis Report

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MH8 Sampling/Characterization

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LL Group # 1645616
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MH802

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00111	Moisture	SM 2540 G-1997	1	16095820005B	04/04/2016 21:04	Scott W Freisher	1

Sample Description: MH8-3-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310253
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 12:30 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

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MH803

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Benzene	71-43-2	36		0.11	186.44
10237	sec-Butylbenzene	135-98-8	4.5		0.22	186.44
10237	tert-Butylbenzene	98-06-6	0.50	J	0.22	186.44
10237	Cyclohexane	110-82-7	22		0.22	186.44
10237	1,2-Dibromoethane	106-93-4	N.D.		0.22	186.44
10237	1,2-Dichloroethane	107-06-2	N.D.		0.22	186.44
10237	Ethylbenzene	100-41-4	650		22	18644.44
10237	n-Hexane	110-54-3	41		0.22	186.44
10237	Isopropylbenzene	98-82-8	16		0.22	186.44
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.11	186.44
10237	Naphthalene	91-20-3	32		0.22	186.44
10237	Toluene	108-88-3	76		2.2	1864.44
10237	1,2,4-Trimethylbenzene	95-63-6	110		2.2	1864.44
10237	1,3,5-Trimethylbenzene	108-67-8	34		0.22	186.44
10237	Xylene (Total)	1330-20-7	3,500		22	18644.44
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	2.8		0.077	10
10728	Anthracene	120-12-7	1.1		0.077	10
10728	Benzo(a)anthracene	56-55-3	0.40		0.077	10
10728	Benzo(a)pyrene	50-32-8	0.36	J	0.077	10
10728	Benzo(b)fluoranthene	205-99-2	0.19	J	0.077	10
10728	Benzo(g,h,i)perylene	191-24-2	0.22	J	0.077	10
10728	Benzo(k)fluoranthene	207-08-9	0.11	J	0.077	10
10728	1,1'-Biphenyl	92-52-4	2.5		0.38	10
10728	Di-n-butylphthalate	84-74-2	N.D.		1.5	10
10728	Chrysene	218-01-9	0.72		0.077	10
10728	Dibenz(a,h)anthracene	53-70-3	0.080	J	0.077	10
10728	Diethylphthalate	84-66-2	N.D.		1.5	10
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.38	10
10728	2,4-Dinitrophenol	51-28-5	N.D.		6.9	10
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		1.5	10
10728	Fluoranthene	206-44-0	0.34	J	0.077	10
10728	Fluorene	86-73-7	4.6		0.077	10
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.087	J	0.077	10
10728	2-Methylnaphthalene	91-57-6	85		0.077	10
10728	2-Methylphenol	95-48-7	N.D.		0.38	10
10728	4-Methylphenol	106-44-5	N.D.		0.38	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10728	4-Nitrophenol	100-02-7	N.D.		3.8	10
10728	Phenanthrene	85-01-8	12		0.077	10
10728	Phenol	108-95-2	N.D.		0.38	10
10728	Pyrene	129-00-0	1.6		0.077	10
10728	Pyridine	110-86-1	N.D.		1.5	10
10728	Quinoline	91-22-5	N.D.		0.77	10
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	7.55		0.0667	1

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MH8 Sampling/Characterization

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LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 12:30 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH803

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	15.2	0.338	1
06961	Nickel	7440-02-0	12.5	0.189	1
06971	Vanadium	7440-62-2	23.8	0.189	1
06972	Zinc	7440-66-6	35.6	0.634	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	13.9	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161001AA	04/09/2016 11:16	Anita M Dale	186.44
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161001AA	04/09/2016 11:39	Anita M Dale	1864.44
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161002AA	04/10/2016 01:58	Anita M Dale	18644.44
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140637	03/29/2016 12:30	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140637	03/29/2016 12:30	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140637	03/29/2016 12:30	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/08/2016 20:54	Catherine E Bachman	10
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160965708007	04/08/2016 05:20	Matthew Machtinger	1
06955	Lead	SW-846 6010B	1	160965708007	04/08/2016 05:20	Matthew Machtinger	1
06961	Nickel	SW-846 6010B	1	160965708007	04/08/2016 05:20	Matthew Machtinger	1
06971	Vanadium	SW-846 6010B	1	160965708007	04/08/2016 05:20	Matthew Machtinger	1
06972	Zinc	SW-846 6010B	1	160965708007	04/08/2016 05:20	Matthew Machtinger	1

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Analysis Report

Sample Description: MH8-3-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310253
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 12:30 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH803

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160965708007	04/06/2016 09:30	Christopher M Klumpp	1
00111	Moisture	SM 2540 G-1997	1	16095820005B	04/04/2016 21:04	Scott W Freisher	1

Sample Description: MH8-4-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310254
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 12:50 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH804

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Benzene	71-43-2	81		0.59	1002.74
10237	sec-Butylbenzene	135-98-8	9.8		1.2	1002.74
10237	tert-Butylbenzene	98-06-6	N.D.		1.2	1002.74
10237	Cyclohexane	110-82-7	48		1.2	1002.74
10237	1,2-Dibromoethane	106-93-4	N.D.		1.2	1002.74
10237	1,2-Dichloroethane	107-06-2	N.D.		1.2	1002.74
10237	Ethylbenzene	100-41-4	1,600		12	10027.44
10237	n-Hexane	110-54-3	120		1.2	1002.74
10237	Isopropylbenzene	98-82-8	34		1.2	1002.74
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.59	1002.74
10237	Naphthalene	91-20-3	82		1.2	1002.74
10237	Toluene	108-88-3	58		1.2	1002.74
10237	1,2,4-Trimethylbenzene	95-63-6	240		1.2	1002.74
10237	1,3,5-Trimethylbenzene	108-67-8	86		1.2	1002.74
10237	Xylene (Total)	1330-20-7	8,500		12	10027.44
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	7.1		0.19	10
10728	Anthracene	120-12-7	3.0		0.19	10
10728	Benzo(a)anthracene	56-55-3	1.4		0.19	10
10728	Benzo(a)pyrene	50-32-8	0.67	J	0.19	10
10728	Benzo(b)fluoranthene	205-99-2	0.51	J	0.19	10
10728	Benzo(g,h,i)perylene	191-24-2	0.42	J	0.19	10
10728	Benzo(k)fluoranthene	207-08-9	N.D.		0.19	10
10728	1,1'-Biphenyl	92-52-4	5.9		0.96	10
10728	Di-n-butylphthalate	84-74-2	N.D.		3.8	10
10728	Chrysene	218-01-9	2.5		0.19	10
10728	Dibenz(a,h)anthracene	53-70-3	N.D.		0.19	10
10728	Diethylphthalate	84-66-2	N.D.		3.8	10
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.96	10
10728	2,4-Dinitrophenol	51-28-5	N.D.		17	10
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		3.8	10
10728	Fluoranthene	206-44-0	0.92	J	0.19	10
10728	Fluorene	86-73-7	11		0.19	10
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.19	10
10728	2-Methylnaphthalene	91-57-6	220		0.19	10
10728	2-Methylphenol	95-48-7	N.D.		0.96	10
10728	4-Methylphenol	106-44-5	N.D.		0.96	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10728	4-Nitrophenol	100-02-7	N.D.		9.6	10
10728	Phenanthrene	85-01-8	28		0.19	10
10728	Phenol	108-95-2	N.D.		0.96	10
10728	Pyrene	129-00-0	4.6		0.19	10
10728	Pyridine	110-86-1	N.D.		3.8	10
10728	Quinoline	91-22-5	N.D.		1.9	10
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	6.51		0.0764	1

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Analysis Report

Sample Description: MH8-4-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310254
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 12:50 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH804

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	26.2	0.387	1
06961	Nickel	7440-02-0	12.4	0.217	1
06971	Vanadium	7440-62-2	20.7	0.217	1
06972	Zinc	7440-66-6	40.2	0.726	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	14.5	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161001AA	04/09/2016 12:02	Anita M Dale	1002.74
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161001AA	04/09/2016 12:25	Anita M Dale	10027.44
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140637	03/29/2016 12:50	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140637	03/29/2016 12:50	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140637	03/29/2016 12:50	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/08/2016 21:20	Catherine E Bachman	10
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160965708007	04/08/2016 05:23	Matthew Machtinger	1
06955	Lead	SW-846 6010B	1	160965708007	04/08/2016 05:23	Matthew Machtinger	1
06961	Nickel	SW-846 6010B	1	160965708007	04/08/2016 05:23	Matthew Machtinger	1
06971	Vanadium	SW-846 6010B	1	160965708007	04/08/2016 05:23	Matthew Machtinger	1
06972	Zinc	SW-846 6010B	1	160965708007	04/08/2016 05:23	Matthew Machtinger	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160965708007	04/06/2016 09:30	Christopher M Klumpp	1
00111	Moisture	SM 2540 G-1997	1	16095820005B	04/04/2016 21:04	Scott W Freisher	1

Sample Description: MH8-5-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310255
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 13:05 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH805

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Benzene	71-43-2	56		0.57	985.4
10237	sec-Butylbenzene	135-98-8	11		1.1	985.4
10237	tert-Butylbenzene	98-06-6	1.2	J	1.1	985.4
10237	Cyclohexane	110-82-7	31		1.1	985.4
10237	1,2-Dibromoethane	106-93-4	N.D.		1.1	985.4
10237	1,2-Dichloroethane	107-06-2	N.D.		1.1	985.4
10237	Ethylbenzene	100-41-4	1,400		11	9853.99
10237	n-Hexane	110-54-3	40		1.1	985.4
10237	Isopropylbenzene	98-82-8	35		1.1	985.4
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.57	985.4
10237	Naphthalene	91-20-3	84		1.1	985.4
10237	Toluene	108-88-3	150		1.1	985.4
10237	1,2,4-Trimethylbenzene	95-63-6	250		1.1	985.4
10237	1,3,5-Trimethylbenzene	108-67-8	89		1.1	985.4
10237	Xylene (Total)	1330-20-7	7,500		11	9853.99
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	9.6		0.19	10
10728	Anthracene	120-12-7	3.9		0.19	10
10728	Benzo(a)anthracene	56-55-3	1.3		0.19	10
10728	Benzo(a)pyrene	50-32-8	0.59	J	0.19	10
10728	Benzo(b)fluoranthene	205-99-2	0.45	J	0.19	10
10728	Benzo(g,h,i)perylene	191-24-2	0.39	J	0.19	10
10728	Benzo(k)fluoranthene	207-08-9	N.D.		0.19	10
10728	1,1'-Biphenyl	92-52-4	8.6		0.96	10
10728	Di-n-butylphthalate	84-74-2	N.D.		3.9	10
10728	Chrysene	218-01-9	2.4		0.19	10
10728	Dibenz(a,h)anthracene	53-70-3	N.D.		0.19	10
10728	Diethylphthalate	84-66-2	N.D.		3.9	10
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.96	10
10728	2,4-Dinitrophenol	51-28-5	N.D.		17	10
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		3.9	10
10728	Fluoranthene	206-44-0	1.2		0.19	10
10728	Fluorene	86-73-7	15		0.19	10
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.19	10
10728	2-Methylnaphthalene	91-57-6	320		0.96	50
10728	2-Methylphenol	95-48-7	N.D.		0.96	10
10728	4-Methylphenol	106-44-5	N.D.		0.96	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10728	4-Nitrophenol	100-02-7	N.D.		9.6	10
10728	Phenanthrene	85-01-8	37		0.19	10
10728	Phenol	108-95-2	N.D.		0.96	10
10728	Pyrene	129-00-0	4.8		0.19	10
10728	Pyridine	110-86-1	N.D.		3.9	10
10728	Quinoline	91-22-5	N.D.		1.9	10
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	6.12		0.0781	1

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Analysis Report

Sample Description: MH8-5-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310255
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 13:05 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH805

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	12.2	0.395	1
06961	Nickel	7440-02-0	14.5	0.222	1
06971	Vanadium	7440-62-2	23.2	0.222	1
06972	Zinc	7440-66-6	40.9	0.743	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	13.6	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161001AA	04/09/2016 12:48	Anita M Dale	985.4
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161001AA	04/09/2016 13:11	Anita M Dale	9853.99
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140637	03/29/2016 13:05	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140637	03/29/2016 13:05	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140637	03/29/2016 13:05	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/12/2016 00:18	Catherine E Bachman	10
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/12/2016 00:45	Catherine E Bachman	50
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160965708007	04/08/2016 05:26	Matthew Machtinger	1
06955	Lead	SW-846 6010B	1	160965708007	04/08/2016 05:26	Matthew Machtinger	1
06961	Nickel	SW-846 6010B	1	160965708007	04/08/2016 05:26	Matthew Machtinger	1
06971	Vanadium	SW-846 6010B	1	160965708007	04/08/2016 05:26	Matthew Machtinger	1
06972	Zinc	SW-846 6010B	1	160965708007	04/08/2016 05:26	Matthew Machtinger	1

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Analysis Report

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Sample Description: MH8-5-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310255
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 13:05 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

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1060 Andrew Drive
Suite 140
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MH805

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160965708007	04/06/2016 09:30	Christopher M Klumpp	1
00111	Moisture	SM 2540 G-1997	1	16095820005B	04/04/2016 21:04	Scott W Freisher	1

Sample Description: MH8-6-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310256
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 13:20 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

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1060 Andrew Drive
Suite 140
West Chester PA 19380

MH806

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Benzene	71-43-2	16		0.10	174.2
10237	sec-Butylbenzene	135-98-8	1.9		0.21	174.2
10237	tert-Butylbenzene	98-06-6	0.21	J	0.21	174.2
10237	Cyclohexane	110-82-7	12		0.21	174.2
10237	1,2-Dibromoethane	106-93-4	N.D.		0.21	174.2
10237	1,2-Dichloroethane	107-06-2	N.D.		0.21	174.2
10237	Ethylbenzene	100-41-4	320		2.1	1742.05
10237	n-Hexane	110-54-3	27		0.21	174.2
10237	Isopropylbenzene	98-82-8	6.7		0.21	174.2
10237	Methyl Tertiary Butyl Ether	1634-04-4	0.12	J	0.10	174.2
10237	Naphthalene	91-20-3	14		0.21	174.2
10237	Toluene	108-88-3	78		2.1	1742.05
10237	1,2,4-Trimethylbenzene	95-63-6	42		0.21	174.2
10237	1,3,5-Trimethylbenzene	108-67-8	16		0.21	174.2
10237	Xylene (Total)	1330-20-7	1,600		21	17420.45
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	1.8		0.078	10
10728	Anthracene	120-12-7	0.88		0.078	10
10728	Benzo(a)anthracene	56-55-3	0.28	J	0.078	10
10728	Benzo(a)pyrene	50-32-8	0.14	J	0.078	10
10728	Benzo(b)fluoranthene	205-99-2	0.10	J	0.078	10
10728	Benzo(g,h,i)perylene	191-24-2	0.10	J	0.078	10
10728	Benzo(k)fluoranthene	207-08-9	N.D.		0.078	10
10728	1,1'-Biphenyl	92-52-4	1.8		0.39	10
10728	Di-n-butylphthalate	84-74-2	N.D.		1.6	10
10728	Chrysene	218-01-9	0.48		0.078	10
10728	Dibenz(a,h)anthracene	53-70-3	N.D.		0.078	10
10728	Diethylphthalate	84-66-2	N.D.		1.6	10
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.39	10
10728	2,4-Dinitrophenol	51-28-5	N.D.		7.1	10
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		1.6	10
10728	Fluoranthene	206-44-0	0.25	J	0.078	10
10728	Fluorene	86-73-7	3.3		0.078	10
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.078	10
10728	2-Methylnaphthalene	91-57-6	64		0.078	10
10728	2-Methylphenol	95-48-7	N.D.		0.39	10
10728	4-Methylphenol	106-44-5	N.D.		0.39	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10728	4-Nitrophenol	100-02-7	N.D.		3.9	10
10728	Phenanthrene	85-01-8	7.9		0.078	10
10728	Phenol	108-95-2	N.D.		0.39	10
10728	Pyrene	129-00-0	0.98		0.078	10
10728	Pyridine	110-86-1	N.D.		1.6	10
10728	Quinoline	91-22-5	N.D.		0.78	10
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	5.78		0.0695	1

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Analysis Report

Sample Description: MH8-6-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310256
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 13:20 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH806

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	14.2	0.352	1
06961	Nickel	7440-02-0	11.1	0.197	1
06971	Vanadium	7440-62-2	18.2	0.197	1
06972	Zinc	7440-66-6	27.6	0.660	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	16.1	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161001AA	04/09/2016 13:34	Anita M Dale	174.2
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161001AA	04/09/2016 13:57	Anita M Dale	1742.05
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161002AA	04/10/2016 02:21	Anita M Dale	17420.45
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140639	03/29/2016 13:20	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140639	03/29/2016 13:20	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140639	03/29/2016 13:20	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/12/2016 01:12	Catherine E Bachman	10
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160965708007	04/08/2016 05:29	Matthew Machtinger	1
06955	Lead	SW-846 6010B	1	160965708007	04/08/2016 05:29	Matthew Machtinger	1
06961	Nickel	SW-846 6010B	1	160965708007	04/08/2016 05:29	Matthew Machtinger	1
06971	Vanadium	SW-846 6010B	1	160965708007	04/08/2016 05:29	Matthew Machtinger	1
06972	Zinc	SW-846 6010B	1	160965708007	04/08/2016 05:29	Matthew Machtinger	1

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Analysis Report

Sample Description: MH8-6-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310256
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 13:20 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH806

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160965708007	04/06/2016 09:30	Christopher M Klumpp	1
00111	Moisture	SM 2540 G-1997	1	16095820005B	04/04/2016 21:04	Scott W Freisher	1

Sample Description: MH8-7-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310257
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 14:00 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH807

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Benzene	71-43-2	18		0.63	1085.88
10237	sec-Butylbenzene	135-98-8	5.9	J	1.3	1085.88
10237	tert-Butylbenzene	98-06-6	N.D.		1.3	1085.88
10237	Cyclohexane	110-82-7	15		1.3	1085.88
10237	1,2-Dibromoethane	106-93-4	N.D.		1.3	1085.88
10237	1,2-Dichloroethane	107-06-2	N.D.		1.3	1085.88
10237	Ethylbenzene	100-41-4	840		13	10858.76
10237	n-Hexane	110-54-3	38		1.3	1085.88
10237	Isopropylbenzene	98-82-8	17		1.3	1085.88
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.63	1085.88
10237	Naphthalene	91-20-3	32		1.3	1085.88
10237	Toluene	108-88-3	94		1.3	1085.88
10237	1,2,4-Trimethylbenzene	95-63-6	100		1.3	1085.88
10237	1,3,5-Trimethylbenzene	108-67-8	43		1.3	1085.88
10237	Xylene (Total)	1330-20-7	4,400		13	10858.76
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	1.7		0.039	5
10728	Anthracene	120-12-7	0.97		0.039	5
10728	Benzo(a)anthracene	56-55-3	0.78		0.039	5
10728	Benzo(a)pyrene	50-32-8	1.6		0.039	5
10728	Benzo(b)fluoranthene	205-99-2	0.80		0.039	5
10728	Benzo(g,h,i)perylene	191-24-2	0.91		0.039	5
10728	Benzo(k)fluoranthene	207-08-9	0.096	J	0.039	5
10728	1,1'-Biphenyl	92-52-4	1.8		0.19	5
10728	Di-n-butylphthalate	84-74-2	N.D.		0.78	5
10728	Chrysene	218-01-9	2.5		0.039	5
10728	Dibenz(a,h)anthracene	53-70-3	0.32		0.039	5
10728	Diethylphthalate	84-66-2	N.D.		0.78	5
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.19	5
10728	2,4-Dinitrophenol	51-28-5	N.D.		3.5	5
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		0.78	5
10728	Fluoranthene	206-44-0	0.35		0.039	5
10728	Fluorene	86-73-7	3.3		0.039	5
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.28		0.039	5
10728	2-Methylnaphthalene	91-57-6	63		0.078	10
10728	2-Methylphenol	95-48-7	N.D.		0.19	5
10728	4-Methylphenol	106-44-5	N.D.		0.19	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10728	4-Nitrophenol	100-02-7	N.D.		1.9	5
10728	Phenanthrene	85-01-8	8.4		0.039	5
10728	Phenol	108-95-2	N.D.		0.19	5
10728	Pyrene	129-00-0	3.3		0.039	5
10728	Pyridine	110-86-1	N.D.		0.78	5
10728	Quinoline	91-22-5	N.D.		0.39	5
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	4.95		0.0852	1

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Analysis Report

Sample Description: MH8-7-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310257
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 14:00 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH807

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	7.14	0.432	1
06961	Nickel	7440-02-0	10.9	0.242	1
06971	Vanadium	7440-62-2	24.0	0.242	1
06972	Zinc	7440-66-6	30.4	0.810	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	14.4	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161001AA	04/09/2016 14:20	Anita M Dale	1085.88
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161001AA	04/09/2016 14:43	Anita M Dale	10858.76
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140637	03/29/2016 14:00	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140637	03/29/2016 14:00	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140637	03/29/2016 14:00	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/08/2016 22:37	Catherine E Bachman	5
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/12/2016 01:39	Catherine E Bachman	10
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160965708007	04/08/2016 05:32	Matthew Machtinger	1
06955	Lead	SW-846 6010B	1	160965708007	04/08/2016 05:32	Matthew Machtinger	1
06961	Nickel	SW-846 6010B	1	160965708007	04/08/2016 05:32	Matthew Machtinger	1
06971	Vanadium	SW-846 6010B	1	160965708007	04/08/2016 05:32	Matthew Machtinger	1
06972	Zinc	SW-846 6010B	1	160965708007	04/08/2016 05:32	Matthew Machtinger	1

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Analysis Report

Sample Description: MH8-7-20160329(3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310257
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 14:00 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

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Suite 140
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MH807

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160965708007	04/06/2016 09:30	Christopher M Klumpp	1
00111	Moisture	SM 2540 G-1997	1	16095820005B	04/04/2016 21:04	Scott W Freisher	1

Sample Description: MH8-8-20160329(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310258
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 13:40 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH808

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Benzene	71-43-2	58		0.62	1067.59
10237	sec-Butylbenzene	135-98-8	15		1.2	1067.59
10237	tert-Butylbenzene	98-06-6	1.8	J	1.2	1067.59
10237	Cyclohexane	110-82-7	76		1.2	1067.59
10237	1,2-Dibromoethane	106-93-4	N.D.		1.2	1067.59
10237	1,2-Dichloroethane	107-06-2	N.D.		1.2	1067.59
10237	Ethylbenzene	100-41-4	3,100		62	53379.63
10237	n-Hexane	110-54-3	140		1.2	1067.59
10237	Isopropylbenzene	98-82-8	67		1.2	1067.59
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.62	1067.59
10237	Naphthalene	91-20-3	100		1.2	1067.59
10237	Toluene	108-88-3	220		1.2	1067.59
10237	1,2,4-Trimethylbenzene	95-63-6	330		1.2	1067.59
10237	1,3,5-Trimethylbenzene	108-67-8	120		1.2	1067.59
10237	Xylene (Total)	1330-20-7	14,000		62	53379.63
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	7.4		0.096	5
10728	Anthracene	120-12-7	3.3		0.096	5
10728	Benzo(a)anthracene	56-55-3	2.2		0.096	5
10728	Benzo(a)pyrene	50-32-8	1.4		0.096	5
10728	Benzo(b)fluoranthene	205-99-2	0.66		0.096	5
10728	Benzo(g,h,i)perylene	191-24-2	0.66		0.096	5
10728	Benzo(k)fluoranthene	207-08-9	0.15	J	0.096	5
10728	1,1'-Biphenyl	92-52-4	6.8		0.48	5
10728	Di-n-butylphthalate	84-74-2	N.D.		1.9	5
10728	Chrysene	218-01-9	3.5		0.096	5
10728	Dibenz(a,h)anthracene	53-70-3	0.30	J	0.096	5
10728	Diethylphthalate	84-66-2	N.D.		1.9	5
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.48	5
10728	2,4-Dinitrophenol	51-28-5	N.D.		8.6	5
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		1.9	5
10728	Fluoranthene	206-44-0	1.3		0.096	5
10728	Fluorene	86-73-7	12		0.096	5
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.26	J	0.096	5
10728	2-Methylnaphthalene	91-57-6	260		0.48	25
10728	2-Methylphenol	95-48-7	N.D.		0.48	5
10728	4-Methylphenol	106-44-5	N.D.		0.48	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10728	4-Nitrophenol	100-02-7	N.D.		4.8	5
10728	Phenanthrene	85-01-8	33		0.096	5
10728	Phenol	108-95-2	N.D.		0.48	5
10728	Pyrene	129-00-0	6.1		0.096	5
10728	Pyridine	110-86-1	N.D.		1.9	5
10728	Quinoline	91-22-5	N.D.		0.96	5
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	7.16		0.0851	1

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Analysis Report

Sample Description: MH8-8-20160329(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310258
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 13:40 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH808

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	8.66	0.431	1
06961	Nickel	7440-02-0	12.8	0.242	1
06971	Vanadium	7440-62-2	25.1	0.242	1
06972	Zinc	7440-66-6	32.8	0.809	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	14.2	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161001AA	04/09/2016 15:05	Anita M Dale	1067.59
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161002AA	04/10/2016 02:44	Anita M Dale	53379.63
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140637	03/29/2016 13:40	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140637	03/29/2016 13:40	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140637	03/29/2016 13:40	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/08/2016 23:03	Catherine E Bachman	5
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/12/2016 02:06	Catherine E Bachman	25
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160965708007	04/08/2016 05:35	Matthew Machtinger	1
06955	Lead	SW-846 6010B	1	160965708007	04/08/2016 05:35	Matthew Machtinger	1
06961	Nickel	SW-846 6010B	1	160965708007	04/08/2016 05:35	Matthew Machtinger	1
06971	Vanadium	SW-846 6010B	1	160965708007	04/08/2016 05:35	Matthew Machtinger	1
06972	Zinc	SW-846 6010B	1	160965708007	04/08/2016 05:35	Matthew Machtinger	1

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Analysis Report

Sample Description: MH8-8-20160329(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310258
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016 13:40 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
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MH808

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160965708007	04/06/2016 09:30	Christopher M Klumpp	1
00111	Moisture	SM 2540 G-1997	1	16095820005B	04/04/2016 21:04	Scott W Freisher	1

Sample Description: MH8-9-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310259
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 07:50 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH809

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Benzene	71-43-2	0.14	J	0.052	98.27
10237	sec-Butylbenzene	135-98-8	N.D.		0.10	98.27
10237	tert-Butylbenzene	98-06-6	N.D.		0.10	98.27
10237	Cyclohexane	110-82-7	23		0.10	98.27
10237	1,2-Dibromoethane	106-93-4	N.D.		0.10	98.27
10237	1,2-Dichloroethane	107-06-2	N.D.		0.10	98.27
10237	Ethylbenzene	100-41-4	0.32	J	0.10	98.27
10237	n-Hexane	110-54-3	1.9		0.10	98.27
10237	Isopropylbenzene	98-82-8	0.50	J	0.10	98.27
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.052	98.27
10237	Naphthalene	91-20-3	N.D.		0.10	98.27
10237	Toluene	108-88-3	N.D.		0.10	98.27
10237	1,2,4-Trimethylbenzene	95-63-6	0.89		0.10	98.27
10237	1,3,5-Trimethylbenzene	108-67-8	0.18	J	0.10	98.27
10237	Xylene (Total)	1330-20-7	3.1		0.10	98.27
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	2.0		0.35	10
10728	Anthracene	120-12-7	2.3		0.35	10
10728	Benzo(a)anthracene	56-55-3	9.3		0.35	10
10728	Benzo(a)pyrene	50-32-8	8.6		0.35	10
10728	Benzo(b)fluoranthene	205-99-2	5.1		0.35	10
10728	Benzo(g,h,i)perylene	191-24-2	7.0		0.35	10
10728	Benzo(k)fluoranthene	207-08-9	0.62	J	0.35	10
10728	1,1'-Biphenyl	92-52-4	N.D.		1.8	10
10728	Di-n-butylphthalate	84-74-2	N.D.		7.1	10
10728	Chrysene	218-01-9	19		0.35	10
10728	Dibenz(a,h)anthracene	53-70-3	1.2	J	0.35	10
10728	Diethylphthalate	84-66-2	N.D.		7.1	10
10728	2,4-Dimethylphenol	105-67-9	N.D.		1.8	10
10728	2,4-Dinitrophenol	51-28-5	N.D.		32	10
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		7.1	10
10728	Fluoranthene	206-44-0	2.5		0.35	10
10728	Fluorene	86-73-7	2.1		0.35	10
10728	Indeno(1,2,3-cd)pyrene	193-39-5	2.0		0.35	10
10728	2-Methylnaphthalene	91-57-6	6.6		0.35	10
10728	2-Methylphenol	95-48-7	N.D.		1.8	10
10728	4-Methylphenol	106-44-5	N.D.		1.8	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10728	4-Nitrophenol	100-02-7	N.D.		18	10
10728	Phenanthrene	85-01-8	7.9		0.35	10
10728	Phenol	108-95-2	N.D.		1.8	10
10728	Pyrene	129-00-0	19		0.35	10
10728	Pyridine	110-86-1	N.D.		7.1	10
10728	Quinoline	91-22-5	N.D.		3.5	10

Reporting limits were raised due to interference from the sample matrix.

Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	6.76		0.0726	1

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Analysis Report

Sample Description: MH8-9-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310259
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 07:50 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH809

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	92.1	0.367	1
06961	Nickel	7440-02-0	19.2	0.206	1
06971	Vanadium	7440-62-2	65.4	0.206	1
06972	Zinc	7440-66-6	85.1	0.690	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	6.2	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161002AA	04/09/2016 19:49	Anita M Dale	98.27
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140637	03/30/2016 07:50	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140637	03/30/2016 07:50	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140637	03/30/2016 07:50	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/08/2016 23:28	Catherine E Bachman	10
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160965708007	04/08/2016 05:39	Matthew Machtinger	1
06955	Lead	SW-846 6010B	1	160965708007	04/08/2016 05:39	Matthew Machtinger	1
06961	Nickel	SW-846 6010B	1	160965708007	04/08/2016 05:39	Matthew Machtinger	1
06971	Vanadium	SW-846 6010B	1	160965708007	04/08/2016 05:39	Matthew Machtinger	1
06972	Zinc	SW-846 6010B	1	160965708007	04/08/2016 05:39	Matthew Machtinger	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160965708007	04/06/2016 09:30	Christopher M Klumpp	1
00111	Moisture	SM 2540 G-1997	2	16096820009A	04/05/2016 21:01	Scott W Freisher	1

Sample Description: MH8-10-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310260
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 08:05 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH810

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Benzene	71-43-2	N.D.		0.11	185.43
10237	sec-Butylbenzene	135-98-8	N.D.		0.22	185.43
10237	tert-Butylbenzene	98-06-6	N.D.		0.22	185.43
10237	Cyclohexane	110-82-7	1.4		0.22	185.43
10237	1,2-Dibromoethane	106-93-4	N.D.		0.22	185.43
10237	1,2-Dichloroethane	107-06-2	N.D.		0.22	185.43
10237	Ethylbenzene	100-41-4	N.D.		0.22	185.43
10237	n-Hexane	110-54-3	0.46	J	0.22	185.43
10237	Isopropylbenzene	98-82-8	N.D.		0.22	185.43
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.11	185.43
10237	Naphthalene	91-20-3	0.64	J	0.22	185.43
10237	Toluene	108-88-3	N.D.		0.22	185.43
10237	1,2,4-Trimethylbenzene	95-63-6	0.25	J	0.22	185.43
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.		0.22	185.43
10237	Xylene (Total)	1330-20-7	0.31	J	0.22	185.43
	Reporting limits were raised due to interference from the sample matrix.					
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	3.8		0.39	10
10728	Anthracene	120-12-7	5.5		0.39	10
10728	Benzo(a)anthracene	56-55-3	21		0.39	10
10728	Benzo(a)pyrene	50-32-8	16		0.39	10
10728	Benzo(b)fluoranthene	205-99-2	8.3		0.39	10
10728	Benzo(g,h,i)perylene	191-24-2	6.7		0.39	10
10728	Benzo(k)fluoranthene	207-08-9	1.7	J	0.39	10
10728	1,1'-Biphenyl	92-52-4	N.D.		2.0	10
10728	Di-n-butylphthalate	84-74-2	N.D.		7.9	10
10728	Chrysene	218-01-9	33		0.39	10
10728	Dibenz(a,h)anthracene	53-70-3	2.4		0.39	10
10728	Diethylphthalate	84-66-2	N.D.		7.9	10
10728	2,4-Dimethylphenol	105-67-9	N.D.		2.0	10
10728	2,4-Dinitrophenol	51-28-5	N.D.		36	10
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		7.9	10
10728	Fluoranthene	206-44-0	4.4		0.39	10
10728	Fluorene	86-73-7	5.2		0.39	10
10728	Indeno(1,2,3-cd)pyrene	193-39-5	2.1		0.39	10
10728	2-Methylnaphthalene	91-57-6	20		0.39	10
10728	2-Methylphenol	95-48-7	N.D.		2.0	10
10728	4-Methylphenol	106-44-5	N.D.		2.0	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10728	4-Nitrophenol	100-02-7	N.D.		20	10
10728	Phenanthrene	85-01-8	20		0.39	10
10728	Phenol	108-95-2	N.D.		2.0	10
10728	Pyrene	129-00-0	33		0.39	10
10728	Pyridine	110-86-1	N.D.		7.9	10
10728	Quinoline	91-22-5	N.D.		3.9	10
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	

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Analysis Report

Sample Description: MH8-10-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310260
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 08:05 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH810

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	4.44	0.0640	1
06955	Lead	7439-92-1	312	0.324	1
06961	Nickel	7440-02-0	21.1	0.182	1
06971	Vanadium	7440-62-2	112	0.182	1
06972	Zinc	7440-66-6	63.2	0.608	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	15.6	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161021AA	04/11/2016 09:30	Anita M Dale	185.43
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140637	03/30/2016 08:05	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140637	03/30/2016 08:05	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140637	03/30/2016 08:05	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/08/2016 23:54	Catherine E Bachman	10
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160965708007	04/08/2016 05:42	Matthew Machtinger	1
06955	Lead	SW-846 6010B	1	160965708007	04/08/2016 05:42	Matthew Machtinger	1
06961	Nickel	SW-846 6010B	1	160965708007	04/08/2016 05:42	Matthew Machtinger	1
06971	Vanadium	SW-846 6010B	1	160965708007	04/08/2016 05:42	Matthew Machtinger	1
06972	Zinc	SW-846 6010B	1	160965708007	04/08/2016 05:42	Matthew Machtinger	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160965708007	04/06/2016 09:30	Christopher M Klumpp	1
00111	Moisture	SM 2540 G-1997	1	16095820005B	04/04/2016 21:04	Scott W Freisher	1

Sample Description: MH8-11-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310261
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 08:20 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH811

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**	**mg/kg**	
10237	Benzene	71-43-2	1.4	0.049	84.99
10237	sec-Butylbenzene	135-98-8	1.0	0.098	84.99
10237	tert-Butylbenzene	98-06-6	0.17 J	0.098	84.99
10237	Cyclohexane	110-82-7	5.4	0.098	84.99
10237	1,2-Dibromoethane	106-93-4	N.D.	0.098	84.99
10237	1,2-Dichloroethane	107-06-2	N.D.	0.098	84.99
10237	Ethylbenzene	100-41-4	70	0.49	424.96
10237	n-Hexane	110-54-3	3.0	0.098	84.99
10237	Isopropylbenzene	98-82-8	3.6	0.098	84.99
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.049	84.99
10237	Naphthalene	91-20-3	1.9	0.098	84.99
10237	Toluene	108-88-3	N.D.	0.098	84.99
10237	1,2,4-Trimethylbenzene	95-63-6	1.4	0.098	84.99
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.098	84.99
10237	Xylene (Total)	1330-20-7	7.9	0.098	84.99
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
10728	Acenaphthene	83-32-9	13	0.38	10
10728	Anthracene	120-12-7	21	0.38	10
10728	Benzo(a)anthracene	56-55-3	76	0.38	10
10728	Benzo(a)pyrene	50-32-8	41	0.38	10
10728	Benzo(b)fluoranthene	205-99-2	23	0.38	10
10728	Benzo(g,h,i)perylene	191-24-2	17	0.38	10
10728	Benzo(k)fluoranthene	207-08-9	3.6	0.38	10
10728	1,1'-Biphenyl	92-52-4	N.D.	1.9	10
10728	Di-n-butylphthalate	84-74-2	N.D.	7.7	10
10728	Chrysene	218-01-9	110	0.38	10
10728	Dibenz(a,h)anthracene	53-70-3	6.8	0.38	10
10728	Diethylphthalate	84-66-2	N.D.	7.7	10
10728	2,4-Dimethylphenol	105-67-9	N.D.	1.9	10
10728	2,4-Dinitrophenol	51-28-5	N.D.	34	10
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	7.7	10
10728	Fluoranthene	206-44-0	26	0.38	10
10728	Fluorene	86-73-7	21	0.38	10
10728	Indeno(1,2,3-cd)pyrene	193-39-5	5.4	0.38	10
10728	2-Methylnaphthalene	91-57-6	110	0.38	10
10728	2-Methylphenol	95-48-7	N.D.	1.9	10
10728	4-Methylphenol	106-44-5	N.D.	1.9	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.				
10728	4-Nitrophenol	100-02-7	N.D.	19	10
10728	Phenanthrene	85-01-8	110	0.38	10
10728	Phenol	108-95-2	N.D.	1.9	10
10728	Pyrene	129-00-0	130	0.38	10
10728	Pyridine	110-86-1	N.D.	7.7	10
10728	Quinoline	91-22-5	N.D.	3.8	10
	Reporting limits were raised due to interference from the sample matrix.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	7.86	0.0849	1

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Analysis Report

Sample Description: MH8-11-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310261
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 08:20 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH811

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	54.1	0.430	1
06961	Nickel	7440-02-0	25.2	0.241	1
06971	Vanadium	7440-62-2	40.7	0.241	1
06972	Zinc	7440-66-6	353	0.807	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	13.3	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161002AA	04/09/2016 20:59	Anita M Dale	424.96
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161021AA	04/11/2016 09:53	Anita M Dale	84.99
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140637	03/30/2016 08:20	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140637	03/30/2016 08:20	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140637	03/30/2016 08:20	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/09/2016 00:20	Catherine E Bachman	10
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160965708007	04/08/2016 05:52	Matthew Machtinger	1
06955	Lead	SW-846 6010B	1	160965708007	04/08/2016 05:52	Matthew Machtinger	1
06961	Nickel	SW-846 6010B	1	160965708007	04/08/2016 05:52	Matthew Machtinger	1
06971	Vanadium	SW-846 6010B	1	160965708007	04/08/2016 05:52	Matthew Machtinger	1
06972	Zinc	SW-846 6010B	1	160965708007	04/08/2016 05:52	Matthew Machtinger	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160965708007	04/06/2016 09:30	Christopher M Klumpp	1
00111	Moisture	SM 2540 G-1997	1	16095820005B	04/04/2016 21:04	Scott W Freisher	1

Sample Description: MH8-12-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310262
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 08:50 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH812

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Benzene	71-43-2	0.065	J	0.051	87.8
10237	sec-Butylbenzene	135-98-8	4.1		0.10	87.8
10237	tert-Butylbenzene	98-06-6	0.55		0.10	87.8
10237	Cyclohexane	110-82-7	1.2		0.10	87.8
10237	1,2-Dibromoethane	106-93-4	N.D.		0.10	87.8
10237	1,2-Dichloroethane	107-06-2	N.D.		0.10	87.8
10237	Ethylbenzene	100-41-4	2.7		0.10	87.8
10237	n-Hexane	110-54-3	N.D.		0.10	87.8
10237	Isopropylbenzene	98-82-8	5.1		0.10	87.8
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.051	87.8
10237	Naphthalene	91-20-3	4.5		0.10	87.8
10237	Toluene	108-88-3	N.D.		0.10	87.8
10237	1,2,4-Trimethylbenzene	95-63-6	0.73		0.10	87.8
10237	1,3,5-Trimethylbenzene	108-67-8	0.61		0.10	87.8
10237	Xylene (Total)	1330-20-7	0.28	J	0.10	87.8
	Reporting limits were raised due to interference from the sample matrix.					
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	0.76		0.097	5
10728	Anthracene	120-12-7	1.0		0.097	5
10728	Benzo(a)anthracene	56-55-3	2.6		0.097	5
10728	Benzo(a)pyrene	50-32-8	2.1		0.097	5
10728	Benzo(b)fluoranthene	205-99-2	1.1		0.097	5
10728	Benzo(g,h,i)perylene	191-24-2	1.8		0.097	5
10728	Benzo(k)fluoranthene	207-08-9	0.23	J	0.097	5
10728	1,1'-Biphenyl	92-52-4	N.D.		0.49	5
10728	Di-n-butylphthalate	84-74-2	N.D.		1.9	5
10728	Chrysene	218-01-9	4.8		0.097	5
10728	Dibenz(a,h)anthracene	53-70-3	0.53		0.097	5
10728	Diethylphthalate	84-66-2	N.D.		1.9	5
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.49	5
10728	2,4-Dinitrophenol	51-28-5	N.D.		8.8	5
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		1.9	5
10728	Fluoranthene	206-44-0	1.0		0.097	5
10728	Fluorene	86-73-7	1.7		0.097	5
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.52		0.097	5
10728	2-Methylnaphthalene	91-57-6	16		0.097	5
10728	2-Methylphenol	95-48-7	N.D.		0.49	5
10728	4-Methylphenol	106-44-5	N.D.		0.49	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10728	4-Nitrophenol	100-02-7	N.D.		4.9	5
10728	Phenanthrene	85-01-8	8.6		0.097	5
10728	Phenol	108-95-2	N.D.		0.49	5
10728	Pyrene	129-00-0	5.9		0.097	5
10728	Pyridine	110-86-1	N.D.		1.9	5
10728	Quinoline	91-22-5	N.D.		0.97	5
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	

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Analysis Report

Sample Description: MH8-12-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310262
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 08:50 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH812

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	7.09	0.0703	1
06955	Lead	7439-92-1	18.7	0.356	1
06961	Nickel	7440-02-0	12.3	0.199	1
06971	Vanadium	7440-62-2	29.3	0.199	1
06972	Zinc	7440-66-6	38.6	0.668	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	14.6	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161021AA	04/11/2016 10:16	Anita M Dale	87.8
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140637	03/30/2016 08:50	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140637	03/30/2016 08:50	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140637	03/30/2016 08:50	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/09/2016 00:46	Catherine E Bachman	5
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160965708007	04/08/2016 05:56	Matthew Machtinger	1
06955	Lead	SW-846 6010B	1	160965708007	04/08/2016 05:56	Matthew Machtinger	1
06961	Nickel	SW-846 6010B	1	160965708007	04/08/2016 05:56	Matthew Machtinger	1
06971	Vanadium	SW-846 6010B	1	160965708007	04/08/2016 05:56	Matthew Machtinger	1
06972	Zinc	SW-846 6010B	1	160965708007	04/08/2016 05:56	Matthew Machtinger	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160965708007	04/06/2016 09:30	Christopher M Klumpp	1
00111	Moisture	SM 2540 G-1997	1	16095820005B	04/04/2016 21:04	Scott W Freisher	1

Sample Description: MH8-13-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310263
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 09:10 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH813

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Benzene	71-43-2	0.57	J	0.10	178.25
10237	sec-Butylbenzene	135-98-8	9.3		0.21	178.25
10237	tert-Butylbenzene	98-06-6	1.1		0.21	178.25
10237	Cyclohexane	110-82-7	13		0.21	178.25
10237	1,2-Dibromoethane	106-93-4	N.D.		0.21	178.25
10237	1,2-Dichloroethane	107-06-2	N.D.		0.21	178.25
10237	Ethylbenzene	100-41-4	100		2.1	1782.45
10237	n-Hexane	110-54-3	8.4		0.21	178.25
10237	Isopropylbenzene	98-82-8	15		0.21	178.25
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.10	178.25
10237	Naphthalene	91-20-3	12		0.21	178.25
10237	Toluene	108-88-3	3.1		0.21	178.25
10237	1,2,4-Trimethylbenzene	95-63-6	14		0.21	178.25
10237	1,3,5-Trimethylbenzene	108-67-8	4.2		0.21	178.25
10237	Xylene (Total)	1330-20-7	350		2.1	1782.45
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	1.0		0.038	5
10728	Anthracene	120-12-7	0.80		0.038	5
10728	Benzo(a)anthracene	56-55-3	0.69		0.038	5
10728	Benzo(a)pyrene	50-32-8	0.64		0.038	5
10728	Benzo(b)fluoranthene	205-99-2	0.36		0.038	5
10728	Benzo(g,h,i)perylene	191-24-2	0.76		0.038	5
10728	Benzo(k)fluoranthene	207-08-9	0.059	J	0.038	5
10728	1,1'-Biphenyl	92-52-4	N.D.		0.19	5
10728	Di-n-butylphthalate	84-74-2	N.D.		0.76	5
10728	Chrysene	218-01-9	1.3		0.038	5
10728	Dibenz(a,h)anthracene	53-70-3	0.12	J	0.038	5
10728	Diethylphthalate	84-66-2	N.D.		0.76	5
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.19	5
10728	2,4-Dinitrophenol	51-28-5	N.D.		3.4	5
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		0.76	5
10728	Fluoranthene	206-44-0	0.39		0.038	5
10728	Fluorene	86-73-7	2.5		0.038	5
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.15	J	0.038	5
10728	2-Methylnaphthalene	91-57-6	49		0.076	10
10728	2-Methylphenol	95-48-7	N.D.		0.19	5
10728	4-Methylphenol	106-44-5	N.D.		0.19	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10728	4-Nitrophenol	100-02-7	N.D.		1.9	5
10728	Phenanthrene	85-01-8	6.9		0.038	5
10728	Phenol	108-95-2	N.D.		0.19	5
10728	Pyrene	129-00-0	1.9		0.038	5
10728	Pyridine	110-86-1	N.D.		0.76	5
10728	Quinoline	91-22-5	N.D.		0.38	5
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	6.95		0.0927	1

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Analysis Report

Sample Description: MH8-13-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310263
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 09:10 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH813

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	7.61	0.469	1
06961	Nickel	7440-02-0	11.5	0.263	1
06971	Vanadium	7440-62-2	22.2	0.263	1
06972	Zinc	7440-66-6	47.0	0.881	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	13.5	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161002AA	04/09/2016 21:45	Anita M Dale	178.25
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161002AA	04/09/2016 22:08	Anita M Dale	1782.45
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140637	03/30/2016 09:10	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140637	03/30/2016 09:10	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140637	03/30/2016 09:10	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/09/2016 01:12	Catherine E Bachman	5
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/12/2016 02:34	Catherine E Bachman	10
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160965708007	04/08/2016 05:59	Matthew Machtinger	1
06955	Lead	SW-846 6010B	1	160965708007	04/08/2016 05:59	Matthew Machtinger	1
06961	Nickel	SW-846 6010B	1	160965708007	04/08/2016 05:59	Matthew Machtinger	1
06971	Vanadium	SW-846 6010B	1	160965708007	04/08/2016 05:59	Matthew Machtinger	1
06972	Zinc	SW-846 6010B	1	160965708007	04/08/2016 05:59	Matthew Machtinger	1

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Analysis Report

Sample Description: MH8-13-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310263
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 09:10 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH813

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160965708007	04/06/2016 09:30	Christopher M Klumpp	1
00111	Moisture	SM 2540 G-1997	1	16095820005B	04/04/2016 21:04	Scott W Freisher	1

Sample Description: MH8-14-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310264
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 09:30 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH814

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Benzene	71-43-2	7.1		0.11	179.07
10237	sec-Butylbenzene	135-98-8	12		0.22	179.07
10237	tert-Butylbenzene	98-06-6	1.5		0.22	179.07
10237	Cyclohexane	110-82-7	16		0.22	179.07
10237	1,2-Dibromoethane	106-93-4	N.D.		0.22	179.07
10237	1,2-Dichloroethane	107-06-2	N.D.		0.22	179.07
10237	Ethylbenzene	100-41-4	0.81	J	0.22	179.07
10237	n-Hexane	110-54-3	0.83	J	0.22	179.07
10237	Isopropylbenzene	98-82-8	15		0.22	179.07
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.11	179.07
10237	Naphthalene	91-20-3	N.D.		0.22	179.07
10237	Toluene	108-88-3	N.D.		0.22	179.07
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.		0.22	179.07
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.		0.22	179.07
10237	Xylene (Total)	1330-20-7	0.83	J	0.22	179.07
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	0.33		0.041	10
10728	Anthracene	120-12-7	0.14	J	0.041	10
10728	Benzo(a)anthracene	56-55-3	0.072	J	0.041	10
10728	Benzo(a)pyrene	50-32-8	0.072	J	0.041	10
10728	Benzo(b)fluoranthene	205-99-2	0.076	J	0.041	10
10728	Benzo(g,h,i)perylene	191-24-2	0.068	J	0.041	10
10728	Benzo(k)fluoranthene	207-08-9	N.D.		0.041	10
10728	1,1'-Biphenyl	92-52-4	N.D.		0.20	10
10728	Di-n-butylphthalate	84-74-2	N.D.		0.82	10
10728	Chrysene	218-01-9	0.18	J	0.041	10
10728	Dibenz(a,h)anthracene	53-70-3	N.D.		0.041	10
10728	Diethylphthalate	84-66-2	N.D.		0.82	10
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.20	10
10728	2,4-Dinitrophenol	51-28-5	N.D.		3.7	10
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		0.82	10
10728	Fluoranthene	206-44-0	0.068	J	0.041	10
10728	Fluorene	86-73-7	0.60		0.041	10
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.054	J	0.041	10
10728	2-Methylnaphthalene	91-57-6	18		0.041	10
10728	2-Methylphenol	95-48-7	N.D.		0.20	10
10728	4-Methylphenol	106-44-5	N.D.		0.20	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10728	4-Nitrophenol	100-02-7	N.D.		2.0	10
10728	Phenanthrene	85-01-8	1.1		0.041	10
10728	Phenol	108-95-2	N.D.		0.20	10
10728	Pyrene	129-00-0	0.24		0.041	10
10728	Pyridine	110-86-1	N.D.		0.82	10
10728	Quinoline	91-22-5	N.D.		0.41	10
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	6.20		0.0846	1
06955	Lead	7439-92-1	7.24		0.428	1

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Analysis Report

Sample Description: MH8-14-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310264
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 09:30 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH814

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06961	Nickel	7440-02-0	12.2	0.240	1
06971	Vanadium	7440-62-2	21.2	0.240	1
06972	Zinc	7440-66-6	32.4	0.805	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	18.9	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161002AA	04/09/2016 22:31	Anita M Dale	179.07
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140637	03/30/2016 09:30	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140637	03/30/2016 09:30	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140637	03/30/2016 09:30	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/12/2016 03:01	Catherine E Bachman	10
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160965708007	04/08/2016 06:02	Matthew Machtinger	1
06955	Lead	SW-846 6010B	1	160965708007	04/08/2016 06:02	Matthew Machtinger	1
06961	Nickel	SW-846 6010B	1	160965708007	04/08/2016 06:02	Matthew Machtinger	1
06971	Vanadium	SW-846 6010B	1	160965708007	04/08/2016 06:02	Matthew Machtinger	1
06972	Zinc	SW-846 6010B	1	160965708007	04/08/2016 06:02	Matthew Machtinger	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160965708007	04/06/2016 09:30	Christopher M Klumpp	1
00111	Moisture	SM 2540 G-1997	1	16095820005B	04/04/2016 21:04	Scott W Freisher	1

Sample Description: MH8-15-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310265
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 09:50 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH815

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Benzene	71-43-2	0.34	J	0.33	558.52
10237	sec-Butylbenzene	135-98-8	0.82	J	0.66	558.52
10237	tert-Butylbenzene	98-06-6	N.D.		0.66	558.52
10237	Cyclohexane	110-82-7	N.D.		0.66	558.52
10237	1,2-Dibromoethane	106-93-4	N.D.		0.66	558.52
10237	1,2-Dichloroethane	107-06-2	N.D.		0.66	558.52
10237	Ethylbenzene	100-41-4	N.D.		0.66	558.52
10237	n-Hexane	110-54-3	N.D.		0.66	558.52
10237	Isopropylbenzene	98-82-8	N.D.		0.66	558.52
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.33	558.52
10237	Naphthalene	91-20-3	N.D.		0.66	558.52
10237	Toluene	108-88-3	N.D.		0.66	558.52
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.		0.66	558.52
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.		0.66	558.52
10237	Xylene (Total)	1330-20-7	N.D.		0.66	558.52
	Reporting limits were raised due to interference from the sample matrix.					
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	13		0.20	5
10728	Anthracene	120-12-7	7.3		0.20	5
10728	Benzo(a)anthracene	56-55-3	8.3		0.20	5
10728	Benzo(a)pyrene	50-32-8	4.9		0.20	5
10728	Benzo(b)fluoranthene	205-99-2	2.9		0.20	5
10728	Benzo(g,h,i)perylene	191-24-2	3.2		0.20	5
10728	Benzo(k)fluoranthene	207-08-9	0.53	J	0.20	5
10728	1,1'-Biphenyl	92-52-4	N.D.		0.99	5
10728	Di-n-butylphthalate	84-74-2	N.D.		4.0	5
10728	Chrysene	218-01-9	15		0.20	5
10728	Dibenz(a,h)anthracene	53-70-3	1.5		0.20	5
10728	Diethylphthalate	84-66-2	N.D.		4.0	5
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.99	5
10728	2,4-Dinitrophenol	51-28-5	N.D.		18	5
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		4.0	5
10728	Fluoranthene	206-44-0	3.2		0.20	5
10728	Fluorene	86-73-7	17		0.20	5
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.93	J	0.20	5
10728	2-Methylnaphthalene	91-57-6	1.3		0.20	5
10728	2-Methylphenol	95-48-7	N.D.		0.99	5
10728	4-Methylphenol	106-44-5	N.D.		0.99	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10728	4-Nitrophenol	100-02-7	N.D.		9.9	5
10728	Phenanthrene	85-01-8	47		0.20	5
10728	Phenol	108-95-2	N.D.		0.99	5
10728	Pyrene	129-00-0	18		0.20	5
10728	Pyridine	110-86-1	N.D.		4.0	5
10728	Quinoline	91-22-5	N.D.		2.0	5
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	

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Analysis Report

Sample Description: MH8-15-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310265
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 09:50 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH815

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	4.73	0.0845	1
06955	Lead	7439-92-1	52.7	0.428	1
06961	Nickel	7440-02-0	11.2	0.240	1
06971	Vanadium	7440-62-2	27.8	0.240	1
06972	Zinc	7440-66-6	69.4	0.803	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	15.9	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161002AA	04/09/2016 23:17	Anita M Dale	558.52
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140637	03/30/2016 09:50	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140637	03/30/2016 09:50	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140637	03/30/2016 09:50	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/08/2016 05:33	Catherine E Bachman	5
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160975708001	04/07/2016 21:21	Elaine F Stoltzfus	1
06955	Lead	SW-846 6010B	1	160975708001	04/07/2016 21:21	Elaine F Stoltzfus	1
06961	Nickel	SW-846 6010B	1	160975708001	04/07/2016 21:21	Elaine F Stoltzfus	1
06971	Vanadium	SW-846 6010B	1	160975708001	04/07/2016 21:21	Elaine F Stoltzfus	1
06972	Zinc	SW-846 6010B	1	160975708001	04/07/2016 21:21	Elaine F Stoltzfus	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160975708001	04/06/2016 22:34	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-1997	1	16095820005B	04/04/2016 21:04	Scott W Freisher	1

Sample Description: MH8-16-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310266
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 10:40 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH816

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Benzene	71-43-2	120		0.34	556.77
10237	sec-Butylbenzene	135-98-8	15		0.68	556.77
10237	tert-Butylbenzene	98-06-6	2.0	J	0.68	556.77
10237	Cyclohexane	110-82-7	82		0.68	556.77
10237	1,2-Dibromoethane	106-93-4	N.D.		0.68	556.77
10237	1,2-Dichloroethane	107-06-2	N.D.		0.68	556.77
10237	Ethylbenzene	100-41-4	3,700		68	55677.18
10237	n-Hexane	110-54-3	170		0.68	556.77
10237	Isopropylbenzene	98-82-8	59		0.68	556.77
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.34	556.77
10237	Naphthalene	91-20-3	99		0.68	556.77
10237	Toluene	108-88-3	500		68	55677.18
10237	1,2,4-Trimethylbenzene	95-63-6	580		68	55677.18
10237	1,3,5-Trimethylbenzene	108-67-8	130		0.68	556.77
10237	Xylene (Total)	1330-20-7	20,000		68	55677.18
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	5.5		0.040	1
10728	Anthracene	120-12-7	2.6		0.040	1
10728	Benzo(a)anthracene	56-55-3	1.5		0.040	1
10728	Benzo(a)pyrene	50-32-8	1.1		0.040	1
10728	Benzo(b)fluoranthene	205-99-2	0.57		0.040	1
10728	Benzo(g,h,i)perylene	191-24-2	0.76		0.040	1
10728	Benzo(k)fluoranthene	207-08-9	0.10	J	0.040	1
10728	1,1'-Biphenyl	92-52-4	4.7		0.20	1
10728	Di-n-butylphthalate	84-74-2	N.D.		0.81	1
10728	Chrysene	218-01-9	3.1		0.040	1
10728	Dibenz(a,h)anthracene	53-70-3	0.16	J	0.040	1
10728	Diethylphthalate	84-66-2	N.D.		0.81	1
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.20	1
10728	2,4-Dinitrophenol	51-28-5	N.D.		3.6	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		0.81	1
10728	Fluoranthene	206-44-0	0.91		0.040	1
10728	Fluorene	86-73-7	9.4		0.040	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.20	J	0.040	1
10728	2-Methylnaphthalene	91-57-6	220		0.40	10
10728	2-Methylphenol	95-48-7	N.D.		0.20	1
10728	4-Methylphenol	106-44-5	N.D.		0.20	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10728	4-Nitrophenol	100-02-7	N.D.		2.0	1
10728	Phenanthrene	85-01-8	24		0.040	1
10728	Phenol	108-95-2	N.D.		0.20	1
10728	Pyrene	129-00-0	4.6		0.040	1
10728	Pyridine	110-86-1	N.D.		0.81	1
10728	Quinoline	91-22-5	N.D.		0.40	1
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	9.05		0.0716	1

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Analysis Report

Sample Description: MH8-16-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310266
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 10:40 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

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1060 Andrew Drive
Suite 140
West Chester PA 19380

MH816

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	6.03	0.362	1
06961	Nickel	7440-02-0	17.3	0.203	1
06971	Vanadium	7440-62-2	33.1	0.203	1
06972	Zinc	7440-66-6	38.5	0.681	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	18.6	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161002AA	04/09/2016 23:40	Anita M Dale	556.77
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161021AA	04/11/2016 09:07	Anita M Dale	55677.18
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140637	03/30/2016 10:40	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140637	03/30/2016 10:40	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140637	03/30/2016 10:40	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/09/2016 02:04	Catherine E Bachman	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/12/2016 03:28	Catherine E Bachman	10
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160975708001	04/07/2016 21:30	Elaine F Stoltzfus	1
06955	Lead	SW-846 6010B	1	160975708001	04/07/2016 21:30	Elaine F Stoltzfus	1
06961	Nickel	SW-846 6010B	1	160975708001	04/07/2016 21:30	Elaine F Stoltzfus	1
06971	Vanadium	SW-846 6010B	1	160975708001	04/07/2016 21:30	Elaine F Stoltzfus	1
06972	Zinc	SW-846 6010B	1	160975708001	04/07/2016 21:30	Elaine F Stoltzfus	1

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Analysis Report

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Sample Description: MH8-16-20160330(2') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310266
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 10:40 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
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Suite 140
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MH816

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160975708001	04/06/2016 22:34	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-1997	1	16095820005B	04/04/2016 21:04	Scott W Freisher	1

Sample Description: MH8-17-20160330(0-1') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310267
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 11:20 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

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1060 Andrew Drive
Suite 140
West Chester PA 19380

MH817

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Benzene	71-43-2	N.D.		1.2	2340.94
10237	sec-Butylbenzene	135-98-8	3.7	J	2.5	2340.94
10237	tert-Butylbenzene	98-06-6	N.D.		2.5	2340.94
10237	Cyclohexane	110-82-7	N.D.		2.5	2340.94
10237	1,2-Dibromoethane	106-93-4	N.D.		2.5	2340.94
10237	1,2-Dichloroethane	107-06-2	N.D.		2.5	2340.94
10237	Ethylbenzene	100-41-4	360		2.5	2340.94
10237	n-Hexane	110-54-3	N.D.		2.5	2340.94
10237	Isopropylbenzene	98-82-8	10	J	2.5	2340.94
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		1.2	2340.94
10237	Naphthalene	91-20-3	51		2.5	2340.94
10237	Toluene	108-88-3	18		2.5	2340.94
10237	1,2,4-Trimethylbenzene	95-63-6	180		2.5	2340.94
10237	1,3,5-Trimethylbenzene	108-67-8	73		2.5	2340.94
10237	Xylene (Total)	1330-20-7	3,000		25	23409.4
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	2.3		0.035	1
10728	Anthracene	120-12-7	1.9		0.035	1
10728	Benzo(a)anthracene	56-55-3	1.7		0.035	1
10728	Benzo(a)pyrene	50-32-8	1.0		0.035	1
10728	Benzo(b)fluoranthene	205-99-2	0.81		0.035	1
10728	Benzo(g,h,i)perylene	191-24-2	1.5		0.035	1
10728	Benzo(k)fluoranthene	207-08-9	0.050	J	0.035	1
10728	1,1'-Biphenyl	92-52-4	2.2		0.18	1
10728	Di-n-butylphthalate	84-74-2	N.D.		0.70	1
10728	Chrysene	218-01-9	2.9		0.035	1
10728	Dibenz(a,h)anthracene	53-70-3	0.31		0.035	1
10728	Diethylphthalate	84-66-2	N.D.		0.70	1
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.18	1
10728	2,4-Dinitrophenol	51-28-5	N.D.		3.2	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	1.8		0.70	1
10728	Fluoranthene	206-44-0	0.89		0.035	1
10728	Fluorene	86-73-7	4.0		0.035	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.42		0.035	1
10728	2-Methylnaphthalene	91-57-6	98		0.18	5
10728	2-Methylphenol	95-48-7	N.D.		0.18	1
10728	4-Methylphenol	106-44-5	N.D.		0.18	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10728	4-Nitrophenol	100-02-7	N.D.		1.8	1
10728	Phenanthrene	85-01-8	13		0.035	1
10728	Phenol	108-95-2	N.D.		0.18	1
10728	Pyrene	129-00-0	5.1		0.035	1
10728	Pyridine	110-86-1	N.D.		0.70	1
10728	Quinoline	91-22-5	N.D.		0.35	1
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	3.58		0.0647	1

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Analysis Report

Sample Description: MH8-17-20160330(0-1') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310267
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 11:20 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH817

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	35.2	0.328	1
06961	Nickel	7440-02-0	9.35	0.184	1
06971	Vanadium	7440-62-2	20.5	0.184	1
06972	Zinc	7440-66-6	155	0.615	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	5.2	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161002AA	04/10/2016 00:27	Anita M Dale	2340.94
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161021AA	04/11/2016 10:39	Anita M Dale	23409.4
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140637	03/30/2016 11:20	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140637	03/30/2016 11:20	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140637	03/30/2016 11:20	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/09/2016 02:30	Catherine E Bachman	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/12/2016 03:55	Catherine E Bachman	5
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160975708001	04/07/2016 21:34	Elaine F Stoltzfus	1
06955	Lead	SW-846 6010B	1	160975708001	04/07/2016 21:34	Elaine F Stoltzfus	1
06961	Nickel	SW-846 6010B	1	160975708001	04/07/2016 21:34	Elaine F Stoltzfus	1
06971	Vanadium	SW-846 6010B	1	160975708001	04/07/2016 21:34	Elaine F Stoltzfus	1
06972	Zinc	SW-846 6010B	1	160975708001	04/07/2016 21:34	Elaine F Stoltzfus	1

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Analysis Report

Sample Description: MH8-17-20160330(0-1') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310267
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 11:20 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

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MH817

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160975708001	04/06/2016 22:34	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-1997	1	16095820005B	04/04/2016 21:04	Scott W Freisher	1

Sample Description: MH8-17-20160330(2-3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310268
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 11:40 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH-17

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Benzene	71-43-2	18		0.099	180.46
10237	sec-Butylbenzene	135-98-8	2.0		0.20	180.46
10237	tert-Butylbenzene	98-06-6	N.D.		0.20	180.46
10237	Cyclohexane	110-82-7	9.3		0.20	180.46
10237	1,2-Dibromoethane	106-93-4	N.D.		0.20	180.46
10237	1,2-Dichloroethane	107-06-2	N.D.		0.20	180.46
10237	Ethylbenzene	100-41-4	480		2.0	1804.56
10237	n-Hexane	110-54-3	13		0.20	180.46
10237	Isopropylbenzene	98-82-8	9.1		0.20	180.46
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.099	180.46
10237	Naphthalene	91-20-3	17		0.20	180.46
10237	Toluene	108-88-3	10		0.20	180.46
10237	1,2,4-Trimethylbenzene	95-63-6	66		2.0	1804.56
10237	1,3,5-Trimethylbenzene	108-67-8	11		0.20	180.46
10237	Xylene (Total)	1330-20-7	1,200		2.0	1804.56
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	3.5		0.036	1
10728	Anthracene	120-12-7	2.7		0.036	1
10728	Benzo(a)anthracene	56-55-3	1.9		0.036	1
10728	Benzo(a)pyrene	50-32-8	1.1		0.036	1
10728	Benzo(b)fluoranthene	205-99-2	0.73		0.036	1
10728	Benzo(g,h,i)perylene	191-24-2	1.2		0.036	1
10728	Benzo(k)fluoranthene	207-08-9	0.15	J	0.036	1
10728	1,1'-Biphenyl	92-52-4	2.8		0.18	1
10728	Di-n-butylphthalate	84-74-2	N.D.		0.73	1
10728	Chrysene	218-01-9	3.6		0.036	1
10728	Dibenz(a,h)anthracene	53-70-3	0.15	J	0.036	1
10728	Diethylphthalate	84-66-2	N.D.		0.73	1
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.18	1
10728	2,4-Dinitrophenol	51-28-5	N.D.		3.3	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	5.7		0.73	1
10728	Fluoranthene	206-44-0	1.1		0.036	1
10728	Fluorene	86-73-7	5.8		0.036	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.32		0.036	1
10728	2-Methylnaphthalene	91-57-6	100		0.18	5
10728	2-Methylphenol	95-48-7	N.D.		0.18	1
10728	4-Methylphenol	106-44-5	N.D.		0.18	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10728	4-Nitrophenol	100-02-7	N.D.		1.8	1
10728	Phenanthrene	85-01-8	18		0.036	1
10728	Phenol	108-95-2	N.D.		0.18	1
10728	Pyrene	129-00-0	5.4		0.036	1
10728	Pyridine	110-86-1	N.D.		0.73	1
10728	Quinoline	91-22-5	N.D.		0.36	1
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	6.54		0.0862	1

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Analysis Report

Sample Description: MH8-17-20160330(2-3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310268
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 11:40 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH-17

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	13.6	0.436	1
06961	Nickel	7440-02-0	13.7	0.245	1
06971	Vanadium	7440-62-2	36.4	0.245	1
06972	Zinc	7440-66-6	39.7	0.820	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	8.8	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161002AA	04/10/2016 00:50	Anita M Dale	1804.56
10237	Evergreen Comprehensive VOCs	SW-846 8260B	1	R161021AA	04/11/2016 11:02	Anita M Dale	180.46
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201609140637	03/30/2016 11:40	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201609140637	03/30/2016 11:40	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201609140637	03/30/2016 11:40	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/09/2016 02:55	Catherine E Bachman	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16096SLD026	04/12/2016 04:21	Catherine E Bachman	5
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16096SLD026	04/06/2016 09:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	160975708001	04/07/2016 21:37	Elaine F Stoltzfus	1
06955	Lead	SW-846 6010B	1	160975708001	04/07/2016 21:37	Elaine F Stoltzfus	1
06961	Nickel	SW-846 6010B	1	160975708001	04/07/2016 21:37	Elaine F Stoltzfus	1
06971	Vanadium	SW-846 6010B	1	160975708001	04/07/2016 21:37	Elaine F Stoltzfus	1
06972	Zinc	SW-846 6010B	1	160975708001	04/07/2016 21:37	Elaine F Stoltzfus	1

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Analysis Report

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Sample Description: MH8-17-20160330(2-3') Grab Soil
MH8 Sampling/Characterization

LL Sample # SW 8310268
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/30/2016 11:40 by D

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH-17

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	160975708001	04/06/2016 22:34	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-1997	1	16095820005B	04/04/2016 21:04	Scott W Freisher	1

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Analysis Report

Sample Description: TB-20160330 Water
MH8 Sampling/Characterization

LL Sample # WW 8310269
LL Group # 1645616
Account # 16657

Project Name: MH8 Sampling/Characterization

Collected: 03/29/2016

Submitted: 03/30/2016 17:05
Reported: 05/02/2016 14:48

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MH8TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	sec-Butylbenzene	135-98-8	N.D.	1	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	1
10335	Cyclohexane	110-82-7	N.D.	2	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	n-Hexane	110-54-3	N.D.	2	1
10335	Isopropylbenzene	98-82-8	N.D.	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Naphthalene	91-20-3	N.D.	1	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10335	Xylene (Total)	1330-20-7	N.D.	0.5	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	Evergreen Comprehensive VOCs	SW-846 8260B	1	N160991AA	04/08/2016 11:42	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N160991AA	04/08/2016 11:42	Nicole S Lamoreaux	1

Quality Control Summary

Client Name: Stantec
Reported: 05/02/2016 14:48

Group Number: 1645616

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result mg/kg	MDL mg/kg
Batch number: R161001AA	Sample number(s): 8310251-8310258	
Benzene	N.D.	0.025
sec-Butylbenzene	N.D.	0.050
tert-Butylbenzene	N.D.	0.050
Cyclohexane	N.D.	0.050
1,2-Dibromoethane	N.D.	0.050
1,2-Dichloroethane	N.D.	0.050
Ethylbenzene	N.D.	0.050
n-Hexane	N.D.	0.050
Isopropylbenzene	N.D.	0.050
Methyl Tertiary Butyl Ether	N.D.	0.025
Naphthalene	N.D.	0.050
Toluene	N.D.	0.050
1,2,4-Trimethylbenzene	N.D.	0.050
1,3,5-Trimethylbenzene	N.D.	0.050
Xylene (Total)	N.D.	0.050
Batch number: R161002AA	Sample number(s): 8310252-8310253,8310256,8310258-8310259,8310261,8310263-8310268	
Benzene	N.D.	0.025
sec-Butylbenzene	N.D.	0.050
tert-Butylbenzene	N.D.	0.050
Cyclohexane	N.D.	0.050
1,2-Dibromoethane	N.D.	0.050
1,2-Dichloroethane	N.D.	0.050
Ethylbenzene	N.D.	0.050
n-Hexane	N.D.	0.050
Isopropylbenzene	N.D.	0.050
Methyl Tertiary Butyl Ether	N.D.	0.025
Naphthalene	N.D.	0.050
Toluene	N.D.	0.050
1,2,4-Trimethylbenzene	N.D.	0.050
1,3,5-Trimethylbenzene	N.D.	0.050
Xylene (Total)	N.D.	0.050
Batch number: R161021AA	Sample number(s): 8310260-8310262,8310266-8310268	
Benzene	N.D.	0.025
sec-Butylbenzene	N.D.	0.050
tert-Butylbenzene	N.D.	0.050
Cyclohexane	N.D.	0.050
1,2-Dibromoethane	N.D.	0.050
1,2-Dichloroethane	N.D.	0.050
Ethylbenzene	N.D.	0.050
n-Hexane	N.D.	0.050
Isopropylbenzene	N.D.	0.050
Methyl Tertiary Butyl Ether	N.D.	0.025

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Stantec
Reported: 05/02/2016 14:48

Group Number: 1645616

Method Blank (continued)

Analysis Name	Result	MDL
	mg/kg	mg/kg
Naphthalene	N.D.	0.050
Toluene	N.D.	0.050
1,2,4-Trimethylbenzene	N.D.	0.050
1,3,5-Trimethylbenzene	N.D.	0.050
Xylene (Total)	N.D.	0.050
	ug/l	ug/l
Batch number: N160991AA	Sample number(s): 8310269	
Benzene	N.D.	0.5
sec-Butylbenzene	N.D.	1
tert-Butylbenzene	N.D.	1
Cyclohexane	N.D.	2
1,2-Dibromoethane	N.D.	0.5
1,2-Dichloroethane	N.D.	0.5
Ethylbenzene	N.D.	0.5
n-Hexane	N.D.	2
Isopropylbenzene	N.D.	1
Methyl Tertiary Butyl Ether	N.D.	0.5
Naphthalene	N.D.	1
Toluene	N.D.	0.5
1,2,4-Trimethylbenzene	N.D.	1
1,3,5-Trimethylbenzene	N.D.	1
Xylene (Total)	N.D.	0.5
	mg/kg	mg/kg
Batch number: 16096SLD026	Sample number(s): 8310251-8310268	
Acenaphthene	N.D.	0.0033
Anthracene	N.D.	0.0033
Benzo(a)anthracene	N.D.	0.0033
Benzo(a)pyrene	N.D.	0.0033
Benzo(b)fluoranthene	N.D.	0.0033
Benzo(g,h,i)perylene	N.D.	0.0033
Benzo(k)fluoranthene	N.D.	0.0033
1,1'-Biphenyl	N.D.	0.017
Di-n-butylphthalate	N.D.	0.067
Chrysene	N.D.	0.0033
Dibenz(a,h)anthracene	N.D.	0.0033
Diethylphthalate	N.D.	0.067
2,4-Dimethylphenol	N.D.	0.017
2,4-Dinitrophenol	N.D.	0.30
bis(2-Ethylhexyl)phthalate	N.D.	0.067
Fluoranthene	N.D.	0.0033
Fluorene	N.D.	0.0033
Indeno(1,2,3-cd)pyrene	N.D.	0.0033
2-Methylnaphthalene	N.D.	0.0033
2-Methylphenol	N.D.	0.017
4-Methylphenol	N.D.	0.017
4-Nitrophenol	N.D.	0.17
Phenanthrene	N.D.	0.0033
Phenol	N.D.	0.017
Pyrene	N.D.	0.0033

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Stantec
Reported: 05/02/2016 14:48

Group Number: 1645616

Method Blank (continued)

Analysis Name	Result mg/kg	MDL mg/kg
Pyridine	N.D.	0.067
Quinoline	N.D.	0.033
Batch number: 160965708007	Sample number(s): 8310251-8310264	
Cobalt	N.D.	0.0810
Lead	N.D.	0.410
Nickel	N.D.	0.230
Vanadium	0.241 J	0.230
Zinc	N.D.	0.770
Batch number: 160975708001	Sample number(s): 8310265-8310268	
Cobalt	N.D.	0.0810
Lead	N.D.	0.410
Nickel	N.D.	0.230
Vanadium	N.D.	0.230
Zinc	N.D.	0.770

LCS/LCSD

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: R161001AA	Sample number(s): 8310251-8310258								
Benzene	1.00	0.975	1.00	0.973	98	97	80-120	0	30
sec-Butylbenzene	1.00	0.977	1.00	0.961	98	96	64-122	2	30
tert-Butylbenzene	1.00	0.977	1.00	0.971	98	97	68-120	1	30
Cyclohexane	1.00	0.995	1.00	1.03	100	103	58-120	4	30
1,2-Dibromoethane	1.00	0.961	1.00	0.946	96	95	80-120	2	30
1,2-Dichloroethane	1.00	0.984	1.00	0.992	98	99	77-130	1	30
Ethylbenzene	1.00	0.944	1.00	0.940	94	94	80-120	0	30
n-Hexane	1.00	1.02	1.00	1.08	102	108	38-135	5	30
Isopropylbenzene	1.00	0.974	1.00	0.936	97	94	70-120	4	30
Methyl Tertiary Butyl Ether	1.00	0.998	1.00	0.969	100	97	72-120	3	30
Naphthalene	1.00	0.980	1.00	0.981	98	98	53-120	0	30
Toluene	1.00	0.959	1.00	0.918	96	92	80-120	4	30
1,2,4-Trimethylbenzene	1.00	0.941	1.00	0.916	94	92	74-120	3	30
1,3,5-Trimethylbenzene	1.00	0.948	1.00	0.956	95	96	73-120	1	30
Xylene (Total)	3.00	2.87	3.00	2.81	96	94	80-120	2	30
Batch number: R161002AA	Sample number(s): 8310252-8310253,8310256,8310258-8310259,8310261,8310263-8310268								
Benzene	1.00	0.947	1.00	0.921	95	92	80-120	3	30
sec-Butylbenzene	1.00	0.920	1.00	0.886	92	89	64-122	4	30
tert-Butylbenzene	1.00	0.903	1.00	0.868	90	87	68-120	4	30
Cyclohexane	1.00	0.919	1.00	0.919	92	92	58-120	0	30
1,2-Dibromoethane	1.00	0.930	1.00	0.922	93	92	80-120	1	30
1,2-Dichloroethane	1.00	0.962	1.00	0.923	96	92	77-130	4	30
Ethylbenzene	1.00	0.950	1.00	0.913	95	91	80-120	4	30
n-Hexane	1.00	0.854	1.00	0.906	85	91	38-135	6	30
Isopropylbenzene	1.00	0.947	1.00	0.892	95	89	70-120	6	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Stantec
Reported: 05/02/2016 14:48

Group Number: 1645616

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Methyl Tertiary Butyl Ether	1.00	0.977	1.00	0.941	98	94	72-120	4	30
Naphthalene	1.00	0.966	1.00	0.919	97	92	53-120	5	30
Toluene	1.00	0.939	1.00	0.886	94	89	80-120	6	30
1,2,4-Trimethylbenzene	1.00	0.880	1.00	0.875	88	87	74-120	1	30
1,3,5-Trimethylbenzene	1.00	0.876	1.00	0.891	88	89	73-120	2	30
Xylene (Total)	3.00	2.93	3.00	2.78	98	93	80-120	5	30
Batch number: R161021AA	Sample number(s): 8310260-8310262,8310266-8310268								
Benzene	1.00	0.923	1.00	0.901	92	90	80-120	2	30
sec-Butylbenzene	1.00	0.893	1.00	0.868	89	87	64-122	3	30
tert-Butylbenzene	1.00	0.868	1.00	0.887	87	89	68-120	2	30
Cyclohexane	1.00	0.855	1.00	0.860	85	86	58-120	1	30
1,2-Dibromoethane	1.00	0.908	1.00	0.892	91	89	80-120	2	30
1,2-Dichloroethane	1.00	0.914	1.00	0.898	91	90	77-130	2	30
Ethylbenzene	1.00	0.883	1.00	0.872	88	87	80-120	1	30
n-Hexane	1.00	0.762	1.00	0.781	76	78	38-135	3	30
Isopropylbenzene	1.00	0.899	1.00	0.889	90	89	70-120	1	30
Methyl Tertiary Butyl Ether	1.00	0.931	1.00	0.928	93	93	72-120	0	30
Naphthalene	1.00	0.915	1.00	0.902	91	90	53-120	1	30
Toluene	1.00	0.889	1.00	0.880	89	88	80-120	1	30
1,2,4-Trimethylbenzene	1.00	0.845	1.00	0.843	84	84	74-120	0	30
1,3,5-Trimethylbenzene	1.00	0.858	1.00	0.861	86	86	73-120	0	30
Xylene (Total)	3.00	2.69	3.00	2.67	90	89	80-120	1	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: N160991AA	Sample number(s): 8310269								
Benzene	20	20.89	20	21.02	104	105	78-120	1	30
sec-Butylbenzene	20	20.78	20	21.01	104	105	68-124	1	30
tert-Butylbenzene	20	19.93	20	20.1	100	100	74-121	1	30
Cyclohexane	20	21.73	20	21.86	109	109	65-123	1	30
1,2-Dibromoethane	20	20.49	20	20.7	102	104	80-120	1	30
1,2-Dichloroethane	20	20.61	20	20.67	103	103	72-127	0	30
Ethylbenzene	20	20.81	20	20.81	104	104	78-120	0	30
n-Hexane	20	22.46	20	22.7	112	113	57-131	1	30
Isopropylbenzene	20	21.06	20	21.18	105	106	80-120	1	30
Methyl Tertiary Butyl Ether	20	19.79	20	20.05	99	100	75-120	1	30
Naphthalene	20	18.37	20	17.65	92	88	59-120	4	30
Toluene	20	20.57	20	20.66	103	103	80-120	0	30
1,2,4-Trimethylbenzene	20	20.69	20	20.82	103	104	75-120	1	30
1,3,5-Trimethylbenzene	20	20.9	20	20.91	105	105	75-120	0	30
Xylene (Total)	60	61.55	60	61.55	103	103	80-120	0	30
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 16096SLD026	Sample number(s): 8310251-8310268								
Acenaphthene	1.67	1.67			100		83-116		
Anthracene	1.67	1.68			101		82-118		
Benzo(a)anthracene	1.67	1.67			100		76-119		
Benzo(a)pyrene	1.67	1.59			95		85-117		
Benzo(b)fluoranthene	1.67	1.68			101		78-129		
Benzo(g,h,i)perylene	1.67	1.57			94		77-118		

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Stantec
Reported: 05/02/2016 14:48

Group Number: 1645616

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzo(k)fluoranthene	1.67	1.51			91		79-120		
1,1'-Biphenyl	1.67	1.63			98		76-111		
Di-n-butylphthalate	1.67	1.66			100		84-120		
Chrysene	1.67	1.69			101		80-121		
Dibenz(a,h)anthracene	1.67	1.63			98		81-123		
Diethylphthalate	1.67	1.60			96		81-118		
2,4-Dimethylphenol	1.67	1.56			94		83-120		
2,4-Dinitrophenol	3.33	1.59			48		16-132		
bis(2-Ethylhexyl)phthalate	1.67	1.61			97		81-121		
Fluoranthene	1.67	1.65			99		81-117		
Fluorene	1.67	1.68			101		86-118		
Indeno(1,2,3-cd)pyrene	1.67	1.54			93		81-118		
2-Methylnaphthalene	1.67	1.60			96		83-109		
2-Methylphenol	1.67	1.75			105		80-133		
4-Methylphenol	1.67	1.64			98		73-125		
4-Nitrophenol	1.67	1.51			90		52-133		
Phenanthrene	1.67	1.61			96		80-114		
Phenol	1.67	1.77			106		73-122		
Pyrene	1.67	1.57			94		81-114		
Pyridine	1.67	1.47			88		55-109		
Quinoline	1.67	1.57			94		80-119		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 160965708007	Sample number(s): 8310251-8310264								
Cobalt	50	52.4			105		80-120		
Lead	15	15.68			105		80-120		
Nickel	50	53.23			106		80-120		
Vanadium	50	52.49			105		80-120		
Zinc	50	52.19			104		80-120		
Batch number: 160975708001	Sample number(s): 8310265-8310268								
Cobalt	50	51.61			103		80-120		
Lead	15	15.44			103		80-120		
Nickel	50	52.24			104		80-120		
Vanadium	50	52.97			106		80-120		
Zinc	50	50.09			100		80-120		
	%	%	%	%					
Batch number: 16095820005B	Sample number(s): 8310251-8310258,8310260-8310268								
Moisture	89.5	89.45			100		99-101		
Batch number: 16096820009A	Sample number(s): 8310259								
Moisture	89.5	89.37			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Stantec
Reported: 05/02/2016 14:48

Group Number: 1645616

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 16096SLD026	Sample number(s): 8310251-8310268 UNSPK: 8310265									
Acenaphthene	11.13	1.67	15.59	1.66	12.48	268 (2)	81 (2)	83-116	22	30
Anthracene	6.17	1.67	8.71	1.66	7.51	153*	81*	82-118	15	30
Benzo(a)anthracene	6.95	1.67	9.05	1.66	8.43	126 (2)	89 (2)	76-119	7	30
Benzo(a)pyrene	4.14	1.67	7.17	1.66	6.41	181*	137*	85-117	11	30
Benzo(b)fluoranthene	2.41	1.67	4.34	1.66	4.24	116	111	78-129	2	30
Benzo(g,h,i)perylene	2.67	1.67	4.74	1.66	4.60	124*	117	77-118	3	30
Benzo(k)fluoranthene	0.446	1.67	2.03	1.66	1.66	95	73*	79-120	20	30
1,1'-Biphenyl	N.D.	1.67	1.80	1.66	1.80	108	108	76-111	0	30
Di-n-butylphthalate	N.D.	1.67	N.D.	1.66	N.D.	0*	0*	84-120	0	30
Chrysene	12.54	1.67	15.8	1.66	13.34	195 (2)	48 (2)	80-121	17	30
Dibenz(a,h)anthracene	1.23	1.67	3.26	1.66	2.82	122	96	81-123	14	30
Diethylphthalate	N.D.	1.67	N.D.	1.66	N.D.	0*	0*	81-118	0	30
2,4-Dimethylphenol	N.D.	1.67	1.76	1.66	1.45	106	87	83-120	20	30
2,4-Dinitrophenol	N.D.	3.33	16.63	3.32	16.23	499*	489*	16-132	2	30
bis(2-Ethylhexyl)phthalate	N.D.	1.67	N.D.	1.66	N.D.	0*	0*	81-121	0	30
Fluoranthene	2.67	1.67	5.66	1.66	5.16	180*	150*	81-117	9	30
Fluorene	14.16	1.67	17.3	1.66	16.5	189 (2)	141 (2)	86-118	5	30
Indeno(1,2,3-cd)pyrene	0.786	1.67	2.68	1.66	2.51	114	104	81-118	6	30
2-Methylnaphthalene	1.05	1.67	2.15	1.66	2.39	66*	81*	83-109	11	30
2-Methylphenol	N.D.	1.67	1.87	1.66	1.76	112	106	80-133	6	30
4-Methylphenol	N.D.	1.67	1.48	1.66	1.41	89	85	73-125	5	30
4-Nitrophenol	N.D.	1.67	17.95	1.66	17.31	1078*	1044*	52-133	4	30
Phenanthrene	39.84	1.67	45.37	1.66	40.01	332 (2)	10 (2)	80-114	13	30
Phenol	N.D.	1.67	1.57	1.66	1.53	94	92	73-122	2	30
Pyrene	15.24	1.67	17.38	1.66	15.68	128 (2)	27 (2)	81-114	10	30
Pyridine	N.D.	1.67	N.D.	1.66	N.D.	0*	0*	55-109	0	30
Quinoline	N.D.	1.67	2.20	1.66	1.98	132*	119	80-119	10	30
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 160965708007	Sample number(s): 8310251-8310264 UNSPK: P314419									
Cobalt	4.41	39.68	40.94	47.17	48.68	92	94	75-125	17	20
Lead	4.47	11.9	15.55	14.15	17.69	93	93	75-125	13	20
Nickel	8.07	39.68	45.03	47.17	52.86	93	95	75-125	16	20
Vanadium	31.71	39.68	72.29	47.17	80.47	102	103	75-125	11	20
Zinc	49.41	39.68	87.62	47.17	93.71	96	94	75-125	7	20
Batch number: 160975708001	Sample number(s): 8310265-8310268 UNSPK: P312421									
Cobalt	9.85	39.68	58.03	47.17	69.67	121	127*	75-125	18	20
Lead	115.06	11.9	94.1	14.15	215.18	-176 (2)	707 (2)	75-125	78*	20
Nickel	33.01	39.68	110.41	47.17	135.61	195*	218*	75-125	20	20
Vanadium	90.96	39.68	242.44	47.17	321.21	382*	488*	75-125	28*	20
Zinc	108.08	39.68	151.22	47.17	180.42	109	153*	75-125	18	20

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Stantec
Reported: 05/02/2016 14:48

Group Number: 1645616

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/kg	DUP Conc mg/kg	DUP RPD	DUP RPD Max
Batch number: 160965708007	Sample number(s): 8310251-8310264 BKG: P314419			
Cobalt	4.41	4.32	2	20
Lead	4.47	4.56	2 (1)	20
Nickel	8.07	7.86	3	20
Vanadium	31.71	31.19	2	20
Zinc	49.41	55.06	11	20
Batch number: 160975708001	Sample number(s): 8310265-8310268 BKG: P312421			
Cobalt	9.85	9.06	8	20
Lead	115.06	79.36	37*	20
Nickel	33.01	27.64	18	20
Vanadium	90.96	69.94	26*	20
Zinc	108.08	72.29	40*	20
	%	%		
Batch number: 16095820005B	Sample number(s): 8310251-8310258,8310260-8310268 BKG: 8310252			
Moisture	12.19	12.64	4	5
Batch number: 16096820009A	Sample number(s): 8310259 BKG: 8310259			
Moisture	6.20	5.75	7*	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Evergreen Comprehensive VOCs
Batch number: N160991AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8310269	105	104	98	92
Blank	103	102	98	92
LCS	101	100	100	100
LCSD	101	100	100	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: Evergreen Comprehensive VOCs
Batch number: R161001AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8310251	71	71	73	111
8310252	80	81	75	83
8310253	79	76	69	81
8310254	82	83	79	86
8310255	72	78	70	83
8310256	71	72	67	75
8310257	73	75	75	81
8310258	78	70	75	80

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Stantec
Reported: 05/02/2016 14:48

Group Number: 1645616

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
Blank	98	100	94	90
LCS	95	95	90	90
LCSD	92	92	85	85
Limits:	50-141	54-135	52-141	50-131

Analysis Name: Evergreen Comprehensive VOCs
Batch number: R161002AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8310259	89	85	79	81
8310263	76	77	70	76
8310264	71	70	66	72
8310265	67	68	60	78
8310266	64	62	57	63
8310267	37*	0*	38*	97
Blank	92	92	86	82
LCS	94	93	86	84
LCSD	93	90	84	83
Limits:	50-141	54-135	52-141	50-131

Analysis Name: Evergreen Comprehensive VOCs
Batch number: R161021AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8310260	72	67	57	64
8310261	72	69	58	64
8310262	63	61	57	70
8310268	70	71	61	76
Blank	90	89	83	78
LCS	94	90	83	80
LCSD	92	90	82	80
Limits:	50-141	54-135	52-141	50-131

Analysis Name: Skinner 8270 (microwave)
Batch number: 16096SLD026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
8310251	81	78	80	100	86	96
8310252	76	66	67	238*	82	88
8310253	76	65	73	191*	90	95
8310254	84	72	70	124*	90	97
8310255	96	74	74	428*	107	114
8310256	87	93	85	150*	94	112
8310257	93	58	80	124*	103	104
8310258	87	39*	70	439*	94	98
8310259	78	88	76	98	91	100
8310260	81	84	73	90	94	114
8310261	92	86	71	112	101	122
8310262	72	69	66	103	73	81

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Stantec
Reported: 05/02/2016 14:48

Group Number: 1645616

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
8310263	92	87	77	263*	101	100
8310264	80	80	73	181*	81	89
8310265	87	91	69	109	97	98
8310266	89	24*	65	262*	90	90
8310267	90	40*	64	160*	93	98
8310268	86	48*	63	149*	94	94
Blank	94	103	102	96	99	101
LCS	104	109	96	97	95	94
MS	90	101	66	123	99	111
MSD	79	86	69	96	93	100
Limits:	58-122	57-126	35-136	54-123	63-117	59-129

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories

Acct. # 16657 For Eurofins Lancaster Laboratories use only Group # 16456116 Sample # 8310251-69
Instructions on reverse side correspond with circled numbers.

COC #324418

1 Client Information

Client: Evergreen
Acct. #:
Project Name/#: MH8 Sampling/Characterization
PWSID #:
Project Manager: Mark Schaeffer
P.O. #:
Sampler: Dobinski
Quote #:
Name of state where samples were collected: PA

2 Sample Identification / **3 Collected** / **4 Matrix** / **5 Analysis Requested**

Sample Identification	Date	Time	Grab	Composite	Sediment	Ground	Surface	Potable	NPDES	Soil	Water	Other:	Total # of Containers	VOCs by EPA Method 8260*	SVOCs by EPA Method 8270*	Metals by 6010/6020*	EDB by 8011*	~~EDB by 8260~~						
MH8-1-20160329(3')	3/29/16	1130	X							X			6	X	X	X	X							
MH8-2-20160329(3')		1145								X			6											
MH8-3-20160329(3')		1230								X			6											
MH8-4-20160329(3')		1250								X			6											
MH8-5-20160329(3')		1305								X			6											
MH8-6-20160329(3')		1320								X			6											
MH8-7-20160329(3')		1400								X			6											
MH8-8-20160329(2')		1340								X			6											
MH8-9-20160330(2')	3/30/16	0750								X			6											
MH8-10-20160330(2')		0805								X			6											

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

6 Remarks
* See attached list of compounds and analyses to be tested for (Comprehensive)
COC 1 of 2

7 Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed:

E-mail address: mark.schaeffer@stantec.com

8 Data Package Options (circle if required)
Type I (Validation/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) TX TRRP-13
Type IV (CLP SOW) MA MCP CT RCP

9

Relinquished by	Date	Time	Received by	Date	Time
[signature]	3/30/16	1315	[signature]	3/30/16	1315
[signature]	3-30-16	1705			
			[signature]	3/30/16	1705

EDD Required? Yes No
If yes, format: Stantec EFW EQUIS

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS FedEx Other

Temperature upon receipt 0.3-1.2 °C

The white copy should accompany samples to Eurofins Lancaster Laboratories. The yellow copy should be retained by the client.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories

For Eurofins Lancaster Laboratories use only
Acct. # 16657 Group # 16456116 Sample # 8310251-69
Instructions on reverse side correspond with circled numbers.

COC # 324417

1 Client Information

Client: Evergreen	Acct. #:
Project Name/#: MH8 Sampling /Characterization	PWSID #:
Project Manager: Mark Schaeffer	P.O. #:
Sampler: Dubinski	Quote #:
Name of state where samples were collected: PA	

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

6 Remarks

*See attached list of compounds and analyses to be tested for (comprehensive)

COC 2 of 2

2 Sample Identification	Collected Date	Collected Time	3 Grab	Composite	4 Matrix: Soil	Sediment	Ground	Potable	Surface	NPDES	Water	Other:	Total # of Containers	5 Analysis Requested / Preservation Codes: VOCs by EPA Method 8260K	SVOCs by EPA Method 8270K	Metals by 6010/6020K	EDB by 8011*	EDB by 8260
MH8-11-20160330 (2')	3/30/16	0820	X		X								6					
MH8-12-20160330 (2')		0850			X								6					
MH8-13-20160330 (2')		0910			X								6					
MH8-14-20160330 (2')		0930			X								6					
MH8-15-20160330 (2')		0950			X								6					
MH8-16-20160330 (2')		1040			X								6					
MH8-17-20160330 (0-1')		1120			X								6					
MH8-17-20160330 (2-3')		1140			X								6					
TB-20160330													2	X				X

7 Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed:

E-mail address: mark.schaeffer@stantec.com

8 Data Package Options (circle if required)

Type I (Validation/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) TX TRRP-13

Type IV (CLP SOW) MA MCP CT RCP

9

Relinquished by	Date	Time	Received by	Date	Time
[signature]	3/30/16	1315	Mark Denlinger	3-30-16	1315
Mark Denlinger	3-30-16	1705			
			[signature]	3/30/16	1705

EDD Required? Yes No
If yes, format: Stantec EFW EQUIS

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS FedEx Other

Temperature upon receipt 0.3-1.2 °C

The white copy should accompany samples to Eurofins Lancaster Laboratories. The yellow copy should be retained by the client.

16657| 16456016| 8310251-69

Comprehensive COC List for Evergreen Characterizations (August 2015)

VOCs by EPA Method 8260	CAS No.
Benzene	71-43-2
Butylbenzene, sec-	135-98-8
Butylbenzene, tert-	98-06-6
Cumene	98-82-8
Cyclohexane	110-82-7
Dichloroethane, 1,2-	107-06-2
Ethylbenzene	100-41-4
Ethylene Dibromide*	106-93-4
Hexane	110-54-3
Methyl tert butyl ether	1634-04-4
Toluene	108-88-3
Trimethylbenzene, 1,2,4-	95-63-6
Trimethylbenzene, 1,3,5-	108-67-8
Xylenes	1330-20-7

Metals by Method 6010/6020	CAS No.
Cobalt ***	7440-48-4
Lead***	7439-92-1
Nickel***	7440-02-0
Vanadium***	7440-62-2
Zinc***	7440-66-6

SVOCs by EPA Method 8270	CAS No.
Acenaphthene	83-32-9
Anthracene	120-12-7
Benzo(a)anthracene	56-55-3
Benzo(a)pyrene	50-32-8
Benzo(b)fluroranthene	205-99-2
Benzo(g,h,i)perylene	191-24-2
Benzo(k)fluoranthene	207-08-9
Biphenyl, 1,1-	92-52-4
Bis(2-ethylhexyl) phthalate	117-81-7
Chrysene	218-01-9
Cresol, m- (3-methylphenol)	108-39-4
Cresol, o- (2-methylphenol)	95-48-7
Cresol, p- (4-methylphenol)	106-44-5
Dibenz(a,h)anthracene	53-70-3
Diethyl phthalate	84-66-2
Dimethylphenol, 2,4-	105-67-9
Dibutyl phthalate, n-	84-74-2
Dinitrophenol, 2,4-	51-28-5
Fluoranthene	206-44-0
Fluorene	86-73-7
Indeno(1,2,3-cd)pyrene	193-39-5
Methylnaphthalene, 2-	91-57-6
Naphthalene**	91-20-3
Nitrophenol, 4-	100-02-7
Phenanthrene	85-01-8
Phenol	108-95-2
Pyrene	129-00-0
Pyridine	110-86-1
Quinoline	91-22-5

*Ethylene Dibromide should be analyzed by EPA Method 8011 instead of 8260 in soil for tank investigations and in **all groundwater samples**.

**Naphthalene should be analyzed by EPA Method 8260 instead of 8270 for tank investigations.

***Metals analysis should be total in soil and dissolved in groundwater.

This list is generated from the PADEP SERO Crude Oil Parameters for Corrective Action (CDB|SERO|PADEP|9 Aug 2013) combined with PADEP Short List of Petroleum Products (leaded and unleaded gasoline and No. 1, 2, 4, 5, 6 Fuel Oils).

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Sample Administration Receipt Documentation Log

Doc Log ID: 141142

Group Number(s): 1645616

Client: Stantec

Delivery and Receipt Information

Delivery Method:	ELLE Courier	Arrival Timestamp:	03/30/2016 17:05
Number of Packages:	3	Number of Projects:	1
State/Province of Origin:	PA		

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace ≥ 6mm:	Yes
Paperwork Enclosed:	Yes	VOA IDs (≥ 6mm):	See Below
Samples Intact:	Yes	Total Trip Blank Qty:	2
Missing Samples:	No	Trip Blank Type:	HCl
Extra Samples:	No	Air Quality Samples Present:	No
Discrepancy in Container Qty on COC:	No		

VOA Vial IDs (Headspace ≥ 6mm): TB-20160330

Unpacked by Patrick Engle (3472) at 19:49 on 03/30/2016

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT121	0.6	DT	Wet	Y	Bagged	N
2	DT121	1.2	DT	Wet	Y	Bagged	N
3	DT121	0.3	DT	Wet	Y	Bagged	N

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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