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: June 21, 2016

Project: MHIC AOI5

Submittal Date: 06/07/2016
Group Number: 1669184
PO Number: MHIC AOI5
State of Sample Origin: PA

Client Sample Description	Lancaster Labs (LL) #
AOI5-BH-16-067-0-2 Grab Soil	8413784
AOI5-BH-16-067-8-10 Grab Soil	8413785
AOI5-BH-16-068-0-2 Grab Soil	8413786
AOI5-BH-16-068-6-8 Grab Soil	8413787
AOI5-BH-16-066-0-2 Grab Soil	8413788
AOI5-BH-16-066-6-8 Grab Soil	8413789
AOI5-BH-16-062-0-2 Grab Soil	8413790
AOI5-BH-16-062-7-8 Grab Soil	8413791
AOI5-BH-16-064-0-2 Grab Soil	8413792
AOI5-BH-16-064-8-10 Grab Soil	8413793
AOI5-BH-16-063-0-2 Grab Soil	8413794
AOI5-BH-16-063-6-8 Grab Soil	8413795
AOI5-BH-16-061-0-2 Grab Soil	8413796
AOI5-BH-16-061-10-11 Grab Soil	8413797
AOI5-BH-16-060-0-2 Grab Soil	8413798
AOI5-BH-16-060-8-10 Grab Soil	8413799
AOI5-BH-16-059-0-2 Grab Soil	8413800
AOI5-BH-16-059-8-10 Grab Soil	8413801
AOI5-BH-16-058-0-2 Grab Soil	8413802
AOI5-BH-16-058-3-4 Grab Soil	8413803
AOI5-BH-16-057-0-2 Grab Soil	8413804
AOI5-BH-16-057-7-8 Grab Soil	8413805
AOI5-BH-16-056-0-2 Grab Soil	8413806
AOI5-BH-16-056-2-4 Grab Soil	8413807
Trip Blank Water	8413808

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 Sunoco c/o Stantec Attn: Jennifer Menges

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252

Sample Description: AOI5-BH-16-067-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413784
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 09:10 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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Suite 140
West Chester PA 19380

5MH01

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	196.34
10237	sec-Butylbenzene	135-98-8	1.3	0.22	196.34
10237	tert-Butylbenzene	98-06-6	0.30 J	0.22	196.34
10237	Cyclohexane	110-82-7	N.D.	0.22	196.34
10237	1,2-Dibromoethane	106-93-4	N.D.	0.22	196.34
10237	1,2-Dichloroethane	107-06-2	N.D.	0.22	196.34
10237	Ethylbenzene	100-41-4	N.D.	0.22	196.34
10237	n-Hexane	110-54-3	N.D.	0.22	196.34
10237	Isopropylbenzene	98-82-8	N.D.	0.22	196.34
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.11	196.34
10237	Naphthalene	91-20-3	2.7	0.22	196.34
10237	Toluene	108-88-3	N.D.	0.22	196.34
10237	1,2,4-Trimethylbenzene	95-63-6	4.2	0.22	196.34
10237	1,3,5-Trimethylbenzene	108-67-8	1.4	0.22	196.34
10237	Xylene (Total)	1330-20-7	N.D.	0.22	196.34
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.	0.0037	1
10728	Anthracene	120-12-7	0.024	0.0037	1
10728	Benzo(a)anthracene	56-55-3	0.35	0.0037	1
10728	Benzo(a)pyrene	50-32-8	0.37	0.0037	1
10728	Benzo(b)fluoranthene	205-99-2	0.73	0.0037	1
10728	Benzo(g,h,i)perylene	191-24-2	0.29	0.0037	1
10728	Benzo(k)fluoranthene	207-08-9	0.33	0.0037	1
10728	1,1'-Biphenyl	92-52-4	1.5	0.018	1
10728	Di-n-butylphthalate	84-74-2	N.D.	0.073	1
10728	Chrysene	218-01-9	0.37	0.0037	1
10728	Dibenz(a,h)anthracene	53-70-3	0.083	0.0037	1
10728	Diethylphthalate	84-66-2	N.D.	0.073	1
10728	2,4-Dimethylphenol	105-67-9	N.D.	0.018	1
10728	2,4-Dinitrophenol	51-28-5	N.D.	0.33	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.073	1
10728	Fluoranthene	206-44-0	0.47	0.0037	1
10728	Fluorene	86-73-7	0.10	0.0037	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.26	0.0037	1
10728	2-Methylnaphthalene	91-57-6	13	0.018	5
10728	2-Methylphenol	95-48-7	N.D.	0.018	1
10728	4-Methylphenol	106-44-5	N.D.	0.018	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.	0.18	1
10728	Phenanthrene	85-01-8	0.12	0.0037	1
10728	Phenol	108-95-2	N.D.	0.018	1
10728	Pyrene	129-00-0	0.39	0.0037	1
10728	Pyridine	110-86-1	N.D.	0.073	1
10728	Quinoline	91-22-5	N.D.	0.037	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	18.1	0.509	1
06946	Barium	7440-39-3	111	0.103	1

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Analysis Report

Sample Description: AOI5-BH-16-067-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413784
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 09:10 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06949	Cadmium	7440-43-9	N.D.	0.0423	1
06951	Chromium	7440-47-3	33.3	0.147	1
06952	Cobalt	7440-48-4	9.40	0.0698	1
06955	Lead	7439-92-1	40.5	0.440	1
06961	Nickel	7440-02-0	18.0	0.259	1
06936	Selenium	7782-49-2	2.14	0.776	1
06966	Silver	7440-22-4	1.65	0.155	1
06971	Vanadium	7440-62-2	38.9	0.198	1
06972	Zinc	7440-66-6	97.3	0.664	1
		SW-846 7471A	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.165	0.0104	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	10.1	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	R161671AA	06/15/2016 13:29	Anita M Dale	196.34
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/06/2016 09:10	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/06/2016 09:10	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/06/2016 09:10	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/10/2016 22:13	Edward Monborne	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/17/2016 10:21	Linda M Hartenstine	5
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06935	Arsenic	SW-846 6010B	1	161635708002	06/16/2016 16:40	Cindy M Gehman	1
06946	Barium	SW-846 6010B	1	161635708002	06/16/2016 16:40	Cindy M Gehman	1
06949	Cadmium	SW-846 6010B	1	161635708002	06/16/2016 16:40	Cindy M Gehman	1
06951	Chromium	SW-846 6010B	1	161635708002	06/16/2016 16:40	Cindy M Gehman	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 16:40	Cindy M Gehman	1

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Analysis Report

Sample Description: AOI5-BH-16-067-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413784
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 09:10 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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Suite 140
West Chester PA 19380

5MH01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 16:40	Cindy M Gehman	1
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 16:40	Cindy M Gehman	1
06936	Selenium	SW-846 6010B	1	161635708002	06/20/2016 17:25	Suzanne M Will	1
06966	Silver	SW-846 6010B	1	161635708002	06/20/2016 17:25	Suzanne M Will	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 16:40	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 16:40	Cindy M Gehman	1
00159	Mercury	SW-846 7471A	1	161675711001	06/17/2016 08:12	Damary Valentin	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
05711	Hg-SW, 7471A - U3	SW-846 7471A	1	161675711001	06/16/2016 08:50	Suzanne M Williams	1
00111	Moisture	SM 2540 G-1997	1	16162820001A	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-067-8-10 Grab Soil
MHIC AOI5

LL Sample # SW 8413785
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 09:35 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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West Chester PA 19380

5MH02

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.	0.030	50.97
10237	sec-Butylbenzene	135-98-8	1.2	0.060	50.97
10237	tert-Butylbenzene	98-06-6	0.10 J	0.060	50.97
10237	Cyclohexane	110-82-7	N.D.	0.060	50.97
10237	1,2-Dibromoethane	106-93-4	N.D.	0.060	50.97
10237	1,2-Dichloroethane	107-06-2	N.D.	0.060	50.97
10237	Ethylbenzene	100-41-4	N.D.	0.060	50.97
10237	n-Hexane	110-54-3	N.D.	0.060	50.97
10237	Isopropylbenzene	98-82-8	0.31	0.060	50.97
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.030	50.97
10237	Naphthalene	91-20-3	0.33	0.060	50.97
10237	Toluene	108-88-3	N.D.	0.060	50.97
10237	1,2,4-Trimethylbenzene	95-63-6	0.23 J	0.060	50.97
10237	1,3,5-Trimethylbenzene	108-67-8	0.071 J	0.060	50.97
10237	Xylene (Total)	1330-20-7	N.D.	0.060	50.97
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.	0.0039	1
10728	Anthracene	120-12-7	N.D.	0.0039	1
10728	Benzo(a)anthracene	56-55-3	N.D.	0.0039	1
10728	Benzo(a)pyrene	50-32-8	N.D.	0.0039	1
10728	Benzo(b)fluoranthene	205-99-2	N.D.	0.0039	1
10728	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0039	1
10728	Benzo(k)fluoranthene	207-08-9	N.D.	0.0039	1
10728	1,1'-Biphenyl	92-52-4	N.D.	0.019	1
10728	Di-n-butylphthalate	84-74-2	N.D.	0.078	1
10728	Chrysene	218-01-9	N.D.	0.0039	1
10728	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0039	1
10728	Diethylphthalate	84-66-2	N.D.	0.078	1
10728	2,4-Dimethylphenol	105-67-9	N.D.	0.019	1
10728	2,4-Dinitrophenol	51-28-5	N.D.	0.35	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.078	1
10728	Fluoranthene	206-44-0	N.D.	0.0039	1
10728	Fluorene	86-73-7	0.027	0.0039	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0039	1
10728	2-Methylnaphthalene	91-57-6	2.5	0.0039	1
10728	2-Methylphenol	95-48-7	N.D.	0.019	1
10728	4-Methylphenol	106-44-5	N.D.	0.019	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.	0.19	1
10728	Phenanthrene	85-01-8	0.0099 J	0.0039	1
10728	Phenol	108-95-2	0.026 J	0.019	1
10728	Pyrene	129-00-0	N.D.	0.0039	1
10728	Pyridine	110-86-1	N.D.	0.078	1
10728	Quinoline	91-22-5	N.D.	0.039	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	4.82	0.591	1
06946	Barium	7440-39-3	50.6	0.120	1

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Analysis Report

Sample Description: AOI5-BH-16-067-8-10 Grab Soil
MHIC AOI5

LL Sample # SW 8413785
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 09:35 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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Suite 140
West Chester PA 19380

5MH02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06949	Cadmium	7440-43-9	N.D.	0.0491	1
06951	Chromium	7440-47-3	21.9	0.170	1
06952	Cobalt	7440-48-4	6.22	0.0811	1
06955	Lead	7439-92-1	8.95	0.511	1
06961	Nickel	7440-02-0	10.6	0.301	1
06936	Selenium	7782-49-2	2.29	0.902	1
06966	Silver	7440-22-4	1.37	0.180	1
06971	Vanadium	7440-62-2	22.0	0.230	1
06972	Zinc	7440-66-6	32.6	0.771	1
		SW-846 7471A	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0125 J	0.0111	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	15.4	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	R161671AA	06/15/2016 11:56	Anita M Dale	50.97
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/06/2016 09:35	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/06/2016 09:35	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/06/2016 09:35	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/10/2016 22:34	Edward Monborne	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06935	Arsenic	SW-846 6010B	1	161635708002	06/16/2016 17:01	Cindy M Gehman	1
06946	Barium	SW-846 6010B	1	161635708002	06/16/2016 17:01	Cindy M Gehman	1
06949	Cadmium	SW-846 6010B	1	161635708002	06/16/2016 17:01	Cindy M Gehman	1
06951	Chromium	SW-846 6010B	1	161635708002	06/16/2016 17:01	Cindy M Gehman	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 17:01	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 17:01	Cindy M Gehman	1
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 17:01	Cindy M Gehman	1

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Analysis Report

Sample Description: AOI5-BH-16-067-8-10 Grab Soil
MHIC AOI5

LL Sample # SW 8413785
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 09:35 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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West Chester PA 19380

5MH02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06936	Selenium	SW-846 6010B	1	161635708002	06/20/2016 17:45	Suzanne M Will	1
06966	Silver	SW-846 6010B	1	161635708002	06/20/2016 17:45	Suzanne M Will	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 17:01	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 17:01	Cindy M Gehman	1
00159	Mercury	SW-846 7471A	1	161675711001	06/17/2016 08:14	Damary Valentin	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
05711	Hg-SW, 7471A - U3	SW-846 7471A	1	161675711001	06/16/2016 08:50	Suzanne M Williams	1
00111	Moisture	SM 2540 G-1997	1	16162820001A	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-068-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413786
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 10:00 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH03

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	0.50	0.027	47.69
10237	sec-Butylbenzene	135-98-8	0.45	0.055	47.69
10237	tert-Butylbenzene	98-06-6	N.D.	0.055	47.69
10237	Cyclohexane	110-82-7	N.D.	0.055	47.69
10237	1,2-Dibromoethane	106-93-4	N.D.	0.055	47.69
10237	1,2-Dichloroethane	107-06-2	N.D.	0.055	47.69
10237	Ethylbenzene	100-41-4	0.64	0.055	47.69
10237	n-Hexane	110-54-3	N.D.	0.055	47.69
10237	Isopropylbenzene	98-82-8	0.12 J	0.055	47.69
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.027	47.69
10237	Naphthalene	91-20-3	1.2	0.055	47.69
10237	Toluene	108-88-3	0.15 J	0.055	47.69
10237	1,2,4-Trimethylbenzene	95-63-6	2.7	0.055	47.69
10237	1,3,5-Trimethylbenzene	108-67-8	0.63	0.055	47.69
10237	Xylene (Total)	1330-20-7	3.8	0.055	47.69
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.	0.0038	1
10728	Anthracene	120-12-7	0.0069 J	0.0038	1
10728	Benzo(a)anthracene	56-55-3	N.D.	0.0038	1
10728	Benzo(a)pyrene	50-32-8	0.0044 J	0.0038	1
10728	Benzo(b)fluoranthene	205-99-2	0.0073 J	0.0038	1
10728	Benzo(g,h,i)perylene	191-24-2	0.0076 J	0.0038	1
10728	Benzo(k)fluoranthene	207-08-9	N.D.	0.0038	1
10728	1,1'-Biphenyl	92-52-4	0.26	0.019	1
10728	Di-n-butylphthalate	84-74-2	N.D.	0.076	1
10728	Chrysene	218-01-9	0.0064 J	0.0038	1
10728	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0038	1
10728	Diethylphthalate	84-66-2	N.D.	0.076	1
10728	2,4-Dimethylphenol	105-67-9	N.D.	0.019	1
10728	2,4-Dinitrophenol	51-28-5	N.D.	0.34	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.076	1
10728	Fluoranthene	206-44-0	0.014 J	0.0038	1
10728	Fluorene	86-73-7	0.056	0.0038	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.0041 J	0.0038	1
10728	2-Methylnaphthalene	91-57-6	5.2	0.0076	2
10728	2-Methylphenol	95-48-7	N.D.	0.019	1
10728	4-Methylphenol	106-44-5	N.D.	0.019	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.	0.19	1
10728	Phenanthrene	85-01-8	0.082	0.0038	1
10728	Phenol	108-95-2	0.027 J	0.019	1
10728	Pyrene	129-00-0	0.014 J	0.0038	1
10728	Pyridine	110-86-1	N.D.	0.076	1
10728	Quinoline	91-22-5	N.D.	0.038	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	2.96	0.544	1
06946	Barium	7440-39-3	61.5	0.111	1

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Analysis Report

Sample Description: AOI5-BH-16-068-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413786
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 10:00 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06949	Cadmium	7440-43-9	N.D.	0.0452	1
06951	Chromium	7440-47-3	20.0	0.157	1
06952	Cobalt	7440-48-4	7.76	0.0747	1
06955	Lead	7439-92-1	17.0	0.471	1
06961	Nickel	7440-02-0	12.8	0.277	1
06936	Selenium	7782-49-2	1.47 J	0.830	1
06966	Silver	7440-22-4	0.597	0.166	1
06971	Vanadium	7440-62-2	28.1	0.212	1
06972	Zinc	7440-66-6	44.3	0.710	1
		SW-846 7471A	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.126	0.0111	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	12.6	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	R161671AA	06/15/2016 12:20	Anita M Dale	47.69
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/06/2016 10:00	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/06/2016 10:00	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/06/2016 10:00	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/10/2016 22:56	Edward Monborne	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/14/2016 08:49	Linda M Hartenstine	2
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06935	Arsenic	SW-846 6010B	1	161635708002	06/16/2016 17:04	Cindy M Gehman	1
06946	Barium	SW-846 6010B	1	161635708002	06/16/2016 17:04	Cindy M Gehman	1
06949	Cadmium	SW-846 6010B	1	161635708002	06/16/2016 17:04	Cindy M Gehman	1
06951	Chromium	SW-846 6010B	1	161635708002	06/16/2016 17:04	Cindy M Gehman	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 17:04	Cindy M Gehman	1

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Analysis Report

Sample Description: AOI5-BH-16-068-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413786
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 10:00 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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Suite 140
West Chester PA 19380

5MH03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 17:04	Cindy M Gehman	1
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 17:04	Cindy M Gehman	1
06936	Selenium	SW-846 6010B	1	161635708002	06/20/2016 17:48	Suzanne M Will	1
06966	Silver	SW-846 6010B	1	161635708002	06/20/2016 17:48	Suzanne M Will	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 17:04	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 17:04	Cindy M Gehman	1
00159	Mercury	SW-846 7471A	1	161675711001	06/17/2016 08:16	Damary Valentin	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
05711	Hg-SW, 7471A - U3	SW-846 7471A	1	161675711001	06/16/2016 08:50	Suzanne M Williams	1
00111	Moisture	SM 2540 G-1997	1	16162820001A	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-068-6-8 Grab Soil
MHIC AOI5

LL Sample # SW 8413787
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 10:15 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH04

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	0.063	J	0.030	48.41
10237	sec-Butylbenzene	135-98-8	0.34		0.060	48.41
10237	tert-Butylbenzene	98-06-6	N.D.		0.060	48.41
10237	Cyclohexane	110-82-7	N.D.		0.060	48.41
10237	1,2-Dibromoethane	106-93-4	N.D.		0.060	48.41
10237	1,2-Dichloroethane	107-06-2	N.D.		0.060	48.41
10237	Ethylbenzene	100-41-4	N.D.		0.060	48.41
10237	n-Hexane	110-54-3	N.D.		0.060	48.41
10237	Isopropylbenzene	98-82-8	0.079	J	0.060	48.41
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.030	48.41
10237	Naphthalene	91-20-3	0.52		0.060	48.41
10237	Toluene	108-88-3	1.1		0.060	48.41
10237	1,2,4-Trimethylbenzene	95-63-6	0.42		0.060	48.41
10237	1,3,5-Trimethylbenzene	108-67-8	0.12	J	0.060	48.41
10237	Xylene (Total)	1330-20-7	0.26	J	0.060	48.41
	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	N.D.		0.0041	1
10728	Anthracene	120-12-7	N.D.		0.0041	1
10728	Benzo(a)anthracene	56-55-3	N.D.		0.0041	1
10728	Benzo(a)pyrene	50-32-8	N.D.		0.0041	1
10728	Benzo(b)fluoranthene	205-99-2	N.D.		0.0041	1
10728	Benzo(g,h,i)perylene	191-24-2	N.D.		0.0041	1
10728	Benzo(k)fluoranthene	207-08-9	N.D.		0.0041	1
10728	1,1'-Biphenyl	92-52-4	N.D.		0.021	1
10728	Di-n-butylphthalate	84-74-2	N.D.		0.083	1
10728	Chrysene	218-01-9	N.D.		0.0041	1
10728	Dibenz(a,h)anthracene	53-70-3	N.D.		0.0041	1
10728	Diethylphthalate	84-66-2	N.D.		0.083	1
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.021	1
10728	2,4-Dinitrophenol	51-28-5	N.D.		0.37	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		0.083	1
10728	Fluoranthene	206-44-0	N.D.		0.0041	1
10728	Fluorene	86-73-7	0.013	J	0.0041	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.0041	1
10728	2-Methylnaphthalene	91-57-6	0.42		0.0041	1
10728	2-Methylphenol	95-48-7	N.D.		0.021	1
10728	4-Methylphenol	106-44-5	N.D.		0.021	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.		0.21	1
10728	Phenanthrene	85-01-8	0.013	J	0.0041	1
10728	Phenol	108-95-2	N.D.		0.021	1
10728	Pyrene	129-00-0	N.D.		0.0041	1
10728	Pyridine	110-86-1	N.D.		0.083	1
10728	Quinoline	91-22-5	N.D.		0.041	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06935	Arsenic	7440-38-2	2.29		0.488	1

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Analysis Report

Sample Description: AOI5-BH-16-068-6-8 Grab Soil
MHIC AOI5

LL Sample # SW 8413787
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 10:15 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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Suite 140
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5MH04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06946	Barium	7440-39-3	55.5	0.0993	1
06949	Cadmium	7440-43-9	N.D.	0.0405	1
06951	Chromium	7440-47-3	18.6	0.141	1
06952	Cobalt	7440-48-4	4.21	0.0670	1
06955	Lead	7439-92-1	7.90	0.422	1
06961	Nickel	7440-02-0	13.7	0.248	1
06936	Selenium	7782-49-2	0.940 J	0.744	1
06966	Silver	7440-22-4	0.170 J	0.149	1
06971	Vanadium	7440-62-2	18.4	0.190	1
06972	Zinc	7440-66-6	39.5	0.637	1
		SW-846 7471A	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0331 J	0.0116	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	19.4	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	R161681AA	06/16/2016 15:01	Anita M Dale	48.41
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/06/2016 10:15	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/06/2016 10:15	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/06/2016 10:15	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/10/2016 23:17	Edward Monborne	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06935	Arsenic	SW-846 6010B	1	161635708002	06/16/2016 17:14	Cindy M Gehman	1
06946	Barium	SW-846 6010B	1	161635708002	06/16/2016 17:14	Cindy M Gehman	1
06949	Cadmium	SW-846 6010B	1	161635708002	06/16/2016 17:14	Cindy M Gehman	1
06951	Chromium	SW-846 6010B	1	161635708002	06/16/2016 17:14	Cindy M Gehman	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 17:14	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 17:14	Cindy M Gehman	1

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Analysis Report

Sample Description: AOI5-BH-16-068-6-8 Grab Soil
MHIC AOI5

LL Sample # SW 8413787
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 10:15 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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West Chester PA 19380

5MH04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 17:14	Cindy M Gehman	1
06936	Selenium	SW-846 6010B	1	161635708002	06/20/2016 17:57	Suzanne M Will	1
06966	Silver	SW-846 6010B	1	161635708002	06/20/2016 17:57	Suzanne M Will	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 17:14	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 17:14	Cindy M Gehman	1
00159	Mercury	SW-846 7471A	1	161675711001	06/17/2016 08:22	Damary Valentin	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
05711	Hg-SW, 7471A - U3	SW-846 7471A	1	161675711001	06/16/2016 08:50	Suzanne M Williams	1
00111	Moisture	SM 2540 G-1997	1	16162820001A	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-066-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413788
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 10:40 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH05

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.	0.031	53.64
10237	sec-Butylbenzene	135-98-8	0.73	0.062	53.64
10237	tert-Butylbenzene	98-06-6	0.084 J	0.062	53.64
10237	Cyclohexane	110-82-7	N.D.	0.062	53.64
10237	1,2-Dibromoethane	106-93-4	N.D.	0.062	53.64
10237	1,2-Dichloroethane	107-06-2	N.D.	0.062	53.64
10237	Ethylbenzene	100-41-4	N.D.	0.062	53.64
10237	n-Hexane	110-54-3	N.D.	0.062	53.64
10237	Isopropylbenzene	98-82-8	0.10 J	0.062	53.64
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.031	53.64
10237	Naphthalene	91-20-3	0.20 J	0.062	53.64
10237	Toluene	108-88-3	N.D.	0.062	53.64
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.062	53.64
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.062	53.64
10237	Xylene (Total)	1330-20-7	N.D.	0.062	53.64
	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	N.D.	0.0038	1
10728	Anthracene	120-12-7	N.D.	0.0038	1
10728	Benzo(a)anthracene	56-55-3	N.D.	0.0038	1
10728	Benzo(a)pyrene	50-32-8	N.D.	0.0038	1
10728	Benzo(b)fluoranthene	205-99-2	0.0047 J	0.0038	1
10728	Benzo(g,h,i)perylene	191-24-2	0.0076 J	0.0038	1
10728	Benzo(k)fluoranthene	207-08-9	N.D.	0.0038	1
10728	1,1'-Biphenyl	92-52-4	N.D.	0.019	1
10728	Di-n-butylphthalate	84-74-2	N.D.	0.076	1
10728	Chrysene	218-01-9	N.D.	0.0038	1
10728	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0038	1
10728	Diethylphthalate	84-66-2	N.D.	0.076	1
10728	2,4-Dimethylphenol	105-67-9	N.D.	0.019	1
10728	2,4-Dinitrophenol	51-28-5	N.D.	0.34	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.076	1
10728	Fluoranthene	206-44-0	0.011 J	0.0038	1
10728	Fluorene	86-73-7	N.D.	0.0038	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.0039 J	0.0038	1
10728	2-Methylnaphthalene	91-57-6	0.24	0.0038	1
10728	2-Methylphenol	95-48-7	N.D.	0.019	1
10728	4-Methylphenol	106-44-5	N.D.	0.019	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.	0.19	1
10728	Phenanthrene	85-01-8	0.0080 J	0.0038	1
10728	Phenol	108-95-2	N.D.	0.019	1
10728	Pyrene	129-00-0	0.017 J	0.0038	1
10728	Pyridine	110-86-1	N.D.	0.076	1
10728	Quinoline	91-22-5	N.D.	0.038	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	2.55	0.522	1

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Analysis Report

Sample Description: AOI5-BH-16-066-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413788
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 10:40 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**	**mg/kg**	
06946	Barium	7440-39-3	64.2	0.106	1
06949	Cadmium	7440-43-9	N.D.	0.0434	1
06951	Chromium	7440-47-3	17.4	0.151	1
06952	Cobalt	7440-48-4	5.68	0.0717	1
06955	Lead	7439-92-1	11.1	0.452	1
06961	Nickel	7440-02-0	14.0	0.266	1
06936	Selenium	7782-49-2	0.920 J	0.797	1
06966	Silver	7440-22-4	0.223 J	0.159	1
06971	Vanadium	7440-62-2	27.5	0.204	1
06972	Zinc	7440-66-6	47.2	0.682	1
		SW-846 7471A	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0301 J	0.0111	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	13.8	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	R161671AA	06/15/2016 12:43	Anita M Dale	53.64
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/06/2016 10:40	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/06/2016 10:40	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/06/2016 10:40	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/10/2016 21:10	Edward Monborne	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06935	Arsenic	SW-846 6010B	1	161635708002	06/16/2016 17:17	Cindy M Gehman	1
06946	Barium	SW-846 6010B	1	161635708002	06/16/2016 17:17	Cindy M Gehman	1
06949	Cadmium	SW-846 6010B	1	161635708002	06/16/2016 17:17	Cindy M Gehman	1
06951	Chromium	SW-846 6010B	1	161635708002	06/16/2016 17:17	Cindy M Gehman	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 17:17	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 17:17	Cindy M Gehman	1

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Analysis Report

Sample Description: AOI5-BH-16-066-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413788
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 10:40 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 17:17	Cindy M Gehman	1
06936	Selenium	SW-846 6010B	1	161635708002	06/20/2016 18:00	Suzanne M Will	1
06966	Silver	SW-846 6010B	1	161635708002	06/20/2016 18:00	Suzanne M Will	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 17:17	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 17:17	Cindy M Gehman	1
00159	Mercury	SW-846 7471A	1	161675711001	06/17/2016 08:24	Damary Valentin	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
05711	Hg-SW, 7471A - U3	SW-846 7471A	1	161675711001	06/16/2016 08:50	Suzanne M Williams	1
00111	Moisture	SM 2540 G-1997	1	16162820001A	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-066-6-8 Grab Soil
MHIC AOI5

LL Sample # SW 8413789
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 11:00 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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Suite 140
West Chester PA 19380

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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.	0.035	54.82
10237	sec-Butylbenzene	135-98-8	0.87	0.070	54.82
10237	tert-Butylbenzene	98-06-6	0.087 J	0.070	54.82
10237	Cyclohexane	110-82-7	N.D.	0.070	54.82
10237	1,2-Dibromoethane	106-93-4	N.D.	0.070	54.82
10237	1,2-Dichloroethane	107-06-2	N.D.	0.070	54.82
10237	Ethylbenzene	100-41-4	N.D.	0.070	54.82
10237	n-Hexane	110-54-3	N.D.	0.070	54.82
10237	Isopropylbenzene	98-82-8	0.14 J	0.070	54.82
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.035	54.82
10237	Naphthalene	91-20-3	0.088 J	0.070	54.82
10237	Toluene	108-88-3	N.D.	0.070	54.82
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.070	54.82
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.070	54.82
10237	Xylene (Total)	1330-20-7	N.D.	0.070	54.82
	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	N.D.	0.0042	1
10728	Anthracene	120-12-7	N.D.	0.0042	1
10728	Benzo(a)anthracene	56-55-3	N.D.	0.0042	1
10728	Benzo(a)pyrene	50-32-8	N.D.	0.0042	1
10728	Benzo(b)fluoranthene	205-99-2	0.0045 J	0.0042	1
10728	Benzo(g,h,i)perylene	191-24-2	0.0063 J	0.0042	1
10728	Benzo(k)fluoranthene	207-08-9	N.D.	0.0042	1
10728	1,1'-Biphenyl	92-52-4	N.D.	0.021	1
10728	Di-n-butylphthalate	84-74-2	N.D.	0.084	1
10728	Chrysene	218-01-9	0.0045 J	0.0042	1
10728	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0042	1
10728	Diethylphthalate	84-66-2	N.D.	0.084	1
10728	2,4-Dimethylphenol	105-67-9	N.D.	0.021	1
10728	2,4-Dinitrophenol	51-28-5	N.D.	0.38	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.084	1
10728	Fluoranthene	206-44-0	0.011 J	0.0042	1
10728	Fluorene	86-73-7	0.030	0.0042	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0042	1
10728	2-Methylnaphthalene	91-57-6	0.13	0.0042	1
10728	2-Methylphenol	95-48-7	N.D.	0.021	1
10728	4-Methylphenol	106-44-5	N.D.	0.021	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.	0.21	1
10728	Phenanthrene	85-01-8	0.020 J	0.0042	1
10728	Phenol	108-95-2	N.D.	0.021	1
10728	Pyrene	129-00-0	0.013 J	0.0042	1
10728	Pyridine	110-86-1	N.D.	0.084	1
10728	Quinoline	91-22-5	N.D.	0.042	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	1.20 J	0.509	1

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Analysis Report

Sample Description: AOI5-BH-16-066-6-8 Grab Soil
MHIC AOI5

LL Sample # SW 8413789
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 11:00 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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Suite 140
West Chester PA 19380

5MH06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/kg**		**mg/kg**	
06946	Barium	7440-39-3	39.4		0.104	1
06949	Cadmium	7440-43-9	N.D.		0.0423	1
06951	Chromium	7440-47-3	15.3		0.147	1
06952	Cobalt	7440-48-4	4.51		0.0699	1
06955	Lead	7439-92-1	6.04		0.440	1
06961	Nickel	7440-02-0	12.4		0.259	1
06936	Selenium	7782-49-2	1.09	J	0.777	1
06966	Silver	7440-22-4	N.D.		0.155	1
06971	Vanadium	7440-62-2	17.8		0.199	1
06972	Zinc	7440-66-6	28.6		0.665	1
		SW-846 7471A	**mg/kg**		**mg/kg**	
00159	Mercury	7439-97-6	N.D.		0.0123	1
Wet Chemistry		**SM 2540 G-1997**	**%**		**%**	
00111	Moisture	n.a.	21.2		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	R161681AA	06/16/2016 15:25	Anita M Dale	54.82
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/06/2016 11:00	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/06/2016 11:00	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/06/2016 11:00	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/10/2016 23:38	Edward Monborne	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06935	Arsenic	SW-846 6010B	1	161635708002	06/16/2016 17:20	Cindy M Gehman	1
06946	Barium	SW-846 6010B	1	161635708002	06/16/2016 17:20	Cindy M Gehman	1
06949	Cadmium	SW-846 6010B	1	161635708002	06/16/2016 17:20	Cindy M Gehman	1
06951	Chromium	SW-846 6010B	1	161635708002	06/16/2016 17:20	Cindy M Gehman	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 17:20	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 17:20	Cindy M Gehman	1

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Analysis Report

Sample Description: AOI5-BH-16-066-6-8 Grab Soil
MHIC AOI5

LL Sample # SW 8413789
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 11:00 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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5MH06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 17:20	Cindy M Gehman	1
06936	Selenium	SW-846 6010B	1	161635708002	06/20/2016 18:03	Suzanne M Will	1
06966	Silver	SW-846 6010B	1	161635708002	06/20/2016 18:03	Suzanne M Will	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 17:20	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 17:20	Cindy M Gehman	1
00159	Mercury	SW-846 7471A	1	161675711001	06/17/2016 08:26	Damary Valentin	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
05711	Hg-SW, 7471A - U3	SW-846 7471A	1	161675711001	06/16/2016 08:50	Suzanne M Williams	1
00111	Moisture	SM 2540 G-1997	1	16162820001A	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-062-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413790
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 11:30 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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Suite 140
West Chester PA 19380

5MH07

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	0.070	J	0.035	57.71
10237	sec-Butylbenzene	135-98-8	1.9		0.070	57.71
10237	tert-Butylbenzene	98-06-6	0.38		0.070	57.71
10237	Cyclohexane	110-82-7	0.25	J	0.070	57.71
10237	1,2-Dibromoethane	106-93-4	N.D.		0.070	57.71
10237	1,2-Dichloroethane	107-06-2	N.D.		0.070	57.71
10237	Ethylbenzene	100-41-4	N.D.		0.070	57.71
10237	n-Hexane	110-54-3	0.096	J	0.070	57.71
10237	Isopropylbenzene	98-82-8	2.1		0.070	57.71
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.035	57.71
10237	Naphthalene	91-20-3	0.74		0.070	57.71
10237	Toluene	108-88-3	N.D.		0.070	57.71
10237	1,2,4-Trimethylbenzene	95-63-6	0.16	J	0.070	57.71
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.		0.070	57.71
10237	Xylene (Total)	1330-20-7	0.35	J	0.070	57.71
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.		0.0040	1
10728	Anthracene	120-12-7	N.D.		0.0040	1
10728	Benzo(a)anthracene	56-55-3	0.075		0.0040	1
10728	Benzo(a)pyrene	50-32-8	0.041		0.0040	1
10728	Benzo(b)fluoranthene	205-99-2	0.036		0.0040	1
10728	Benzo(g,h,i)perylene	191-24-2	0.069		0.0040	1
10728	Benzo(k)fluoranthene	207-08-9	0.0090	J	0.0040	1
10728	1,1'-Biphenyl	92-52-4	N.D.		0.020	1
10728	Di-n-butylphthalate	84-74-2	N.D.		0.081	1
10728	Chrysene	218-01-9	0.31		0.0040	1
10728	Dibenz(a,h)anthracene	53-70-3	0.020	J	0.0040	1
10728	Diethylphthalate	84-66-2	N.D.		0.081	1
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.020	1
10728	2,4-Dinitrophenol	51-28-5	N.D.		0.36	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		0.081	1
10728	Fluoranthene	206-44-0	0.049		0.0040	1
10728	Fluorene	86-73-7	0.94		0.0040	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.017	J	0.0040	1
10728	2-Methylnaphthalene	91-57-6	4.5		0.0040	1
10728	2-Methylphenol	95-48-7	N.D.		0.020	1
10728	4-Methylphenol	106-44-5	N.D.		0.020	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.		0.20	1
10728	Phenanthrene	85-01-8	2.1		0.0040	1
10728	Phenol	108-95-2	N.D.		0.020	1
10728	Pyrene	129-00-0	0.18		0.0040	1
10728	Pyridine	110-86-1	N.D.		0.081	1
10728	Quinoline	91-22-5	N.D.		0.040	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	14.5		0.0833	1
06955	Lead	7439-92-1	13.3		0.525	1

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Analysis Report

Sample Description: AOI5-BH-16-062-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413790
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 11:30 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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Suite 140
West Chester PA 19380

5MH07

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	36.3	0.309	1
06971	Vanadium	7440-62-2	58.5	0.237	1
06972	Zinc	7440-66-6	92.7	0.792	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	17.6	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	R161681AA	06/16/2016 15:48	Anita M Dale	57.71
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/06/2016 11:30	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/06/2016 11:30	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/06/2016 11:30	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/10/2016 23:59	Edward Monborne	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 17:24	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 17:24	Cindy M Gehman	1
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 17:24	Cindy M Gehman	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 17:24	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 17:24	Cindy M Gehman	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
00111	Moisture	SM 2540 G-1997	1	16162820001A	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-062-7-8 Grab Soil
MHIC AOI5

LL Sample # SW 8413791
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 12:00 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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Suite 140
West Chester PA 19380

5MH08

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	0.26	J	0.068	107.94
10237	sec-Butylbenzene	135-98-8	1.7		0.14	107.94
10237	tert-Butylbenzene	98-06-6	0.36	J	0.14	107.94
10237	Cyclohexane	110-82-7	11		0.14	107.94
10237	1,2-Dibromoethane	106-93-4	N.D.		0.14	107.94
10237	1,2-Dichloroethane	107-06-2	N.D.		0.14	107.94
10237	Ethylbenzene	100-41-4	0.61	J	0.14	107.94
10237	n-Hexane	110-54-3	N.D.		0.14	107.94
10237	Isopropylbenzene	98-82-8	2.1		0.14	107.94
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.068	107.94
10237	Naphthalene	91-20-3	5.6		0.14	107.94
10237	Toluene	108-88-3	N.D.		0.14	107.94
10237	1,2,4-Trimethylbenzene	95-63-6	21		0.14	107.94
10237	1,3,5-Trimethylbenzene	108-67-8	2.9		0.14	107.94
10237	Xylene (Total)	1330-20-7	1.4		0.14	107.94
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.		0.0041	1
10728	Anthracene	120-12-7	0.18		0.0041	1
10728	Benzo(a)anthracene	56-55-3	0.31		0.0041	1
10728	Benzo(a)pyrene	50-32-8	0.22		0.0041	1
10728	Benzo(b)fluoranthene	205-99-2	0.18		0.0041	1
10728	Benzo(g,h,i)perylene	191-24-2	0.26		0.0041	1
10728	Benzo(k)fluoranthene	207-08-9	0.064		0.0041	1
10728	1,1'-Biphenyl	92-52-4	1.4		0.021	1
10728	Di-n-butylphthalate	84-74-2	N.D.		0.083	1
10728	Chrysene	218-01-9	0.60		0.0041	1
10728	Dibenz(a,h)anthracene	53-70-3	0.048		0.0041	1
10728	Diethylphthalate	84-66-2	N.D.		0.083	1
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.021	1
10728	2,4-Dinitrophenol	51-28-5	N.D.		0.37	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		0.083	1
10728	Fluoranthene	206-44-0	0.22		0.0041	1
10728	Fluorene	86-73-7	0.70		0.0041	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.11		0.0041	1
10728	2-Methylnaphthalene	91-57-6	17		0.041	10
10728	2-Methylphenol	95-48-7	N.D.		0.021	1
10728	4-Methylphenol	106-44-5	N.D.		0.021	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.		0.21	1
10728	Phenanthrene	85-01-8	1.7		0.0041	1
10728	Phenol	108-95-2	N.D.		0.021	1
10728	Pyrene	129-00-0	0.99		0.0041	1
10728	Pyridine	110-86-1	N.D.		0.083	1
10728	Quinoline	91-22-5	N.D.		0.042	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	6.10		0.0698	1
06955	Lead	7439-92-1	33.9		0.439	1

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Analysis Report

Sample Description: AOI5-BH-16-062-7-8 Grab Soil
MHIC AOI5

LL Sample # SW 8413791
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 12:00 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH08

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	0.258	1
06971	Vanadium	7440-62-2	38.3	0.198	1
06972	Zinc	7440-66-6	53.8	0.663	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	20.5	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	R161681AA	06/16/2016 18:08	Anita M Dale	107.94
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/06/2016 12:00	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/06/2016 12:00	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/06/2016 12:00	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/11/2016 00:21	Edward Monborne	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/14/2016 09:10	Linda M Hartenstine	10
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 17:27	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 17:27	Cindy M Gehman	1
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 17:27	Cindy M Gehman	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 17:27	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 17:27	Cindy M Gehman	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
00111	Moisture	SM 2540 G-1997	1	16162820001A	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-064-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413792
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 12:30 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH09

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.	0.0006	1.03
10237	sec-Butylbenzene	135-98-8	N.D.	0.001	1.03
10237	tert-Butylbenzene	98-06-6	N.D.	0.001	1.03
10237	Cyclohexane	110-82-7	N.D.	0.001	1.03
10237	1,2-Dibromoethane	106-93-4	N.D.	0.001	1.03
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	1.03
10237	Ethylbenzene	100-41-4	N.D.	0.001	1.03
10237	n-Hexane	110-54-3	N.D.	0.001	1.03
10237	Isopropylbenzene	98-82-8	N.D.	0.001	1.03
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	1.03
10237	Naphthalene	91-20-3	N.D.	0.001	1.03
10237	Toluene	108-88-3	N.D.	0.001	1.03
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	1.03
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.001	1.03
10237	Xylene (Total)	1330-20-7	N.D.	0.001	1.03
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.	0.0041	1
10728	Anthracene	120-12-7	N.D.	0.0041	1
10728	Benzo(a)anthracene	56-55-3	N.D.	0.0041	1
10728	Benzo(a)pyrene	50-32-8	N.D.	0.0041	1
10728	Benzo(b)fluoranthene	205-99-2	N.D.	0.0041	1
10728	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0041	1
10728	Benzo(k)fluoranthene	207-08-9	N.D.	0.0041	1
10728	1,1'-Biphenyl	92-52-4	N.D.	0.020	1
10728	Di-n-butylphthalate	84-74-2	N.D.	0.081	1
10728	Chrysene	218-01-9	N.D.	0.0041	1
10728	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0041	1
10728	Diethylphthalate	84-66-2	N.D.	0.081	1
10728	2,4-Dimethylphenol	105-67-9	N.D.	0.020	1
10728	2,4-Dinitrophenol	51-28-5	N.D.	0.37	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.081	1
10728	Fluoranthene	206-44-0	N.D.	0.0041	1
10728	Fluorene	86-73-7	N.D.	0.0041	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0041	1
10728	2-Methylnaphthalene	91-57-6	N.D.	0.0041	1
10728	2-Methylphenol	95-48-7	N.D.	0.020	1
10728	4-Methylphenol	106-44-5	N.D.	0.020	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.	0.20	1
10728	Phenanthrene	85-01-8	N.D.	0.0041	1
10728	Phenol	108-95-2	N.D.	0.020	1
10728	Pyrene	129-00-0	N.D.	0.0041	1
10728	Pyridine	110-86-1	N.D.	0.081	1
10728	Quinoline	91-22-5	N.D.	0.041	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	5.94	0.0728	1
06955	Lead	7439-92-1	12.2	0.458	1

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Analysis Report

Sample Description: AOI5-BH-16-064-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413792
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 12:30 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH09

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	11.6	0.270	1
06971	Vanadium	7440-62-2	36.4	0.207	1
06972	Zinc	7440-66-6	34.9	0.692	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	18.8	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	X161641AA	06/12/2016 14:33	Angela D Sneeringer	1.03
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/06/2016 12:30	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/06/2016 12:30	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/06/2016 12:30	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/11/2016 00:42	Edward Monborne	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 17:30	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 17:30	Cindy M Gehman	1
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 17:30	Cindy M Gehman	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 17:30	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 17:30	Cindy M Gehman	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
00111	Moisture	SM 2540 G-1997	1	16162820001A	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-064-8-10 Grab Soil
MHIC AOI5

LL Sample # SW 8413793
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 13:00 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH10

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	0.38 J	0.11	187.63
10237	sec-Butylbenzene	135-98-8	0.61 J	0.22	187.63
10237	tert-Butylbenzene	98-06-6	0.29 J	0.22	187.63
10237	Cyclohexane	110-82-7	26	0.22	187.63
10237	1,2-Dibromoethane	106-93-4	N.D.	0.22	187.63
10237	1,2-Dichloroethane	107-06-2	N.D.	0.22	187.63
10237	Ethylbenzene	100-41-4	8.3	0.22	187.63
10237	n-Hexane	110-54-3	26	0.22	187.63
10237	Isopropylbenzene	98-82-8	2.1	0.22	187.63
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.11	187.63
10237	Naphthalene	91-20-3	5.7	0.22	187.63
10237	Toluene	108-88-3	4.0	0.22	187.63
10237	1,2,4-Trimethylbenzene	95-63-6	19	0.22	187.63
10237	1,3,5-Trimethylbenzene	108-67-8	8.1	0.22	187.63
10237	Xylene (Total)	1330-20-7	20	0.22	187.63
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.	0.0039	1
10728	Anthracene	120-12-7	0.014 J	0.0039	1
10728	Benzo(a)anthracene	56-55-3	0.0071 J	0.0039	1
10728	Benzo(a)pyrene	50-32-8	N.D.	0.0039	1
10728	Benzo(b)fluoranthene	205-99-2	N.D.	0.0039	1
10728	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0039	1
10728	Benzo(k)fluoranthene	207-08-9	N.D.	0.0039	1
10728	1,1'-Biphenyl	92-52-4	0.14	0.020	1
10728	Di-n-butylphthalate	84-74-2	N.D.	0.079	1
10728	Chrysene	218-01-9	0.0085 J	0.0039	1
10728	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0039	1
10728	Diethylphthalate	84-66-2	N.D.	0.079	1
10728	2,4-Dimethylphenol	105-67-9	N.D.	0.020	1
10728	2,4-Dinitrophenol	51-28-5	N.D.	0.35	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.079	1
10728	Fluoranthene	206-44-0	0.0049 J	0.0039	1
10728	Fluorene	86-73-7	0.023	0.0039	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0039	1
10728	2-Methylnaphthalene	91-57-6	3.2	0.0039	1
10728	2-Methylphenol	95-48-7	N.D.	0.020	1
10728	4-Methylphenol	106-44-5	N.D.	0.020	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.	0.20	1
10728	Phenanthrene	85-01-8	0.075	0.0039	1
10728	Phenol	108-95-2	N.D.	0.020	1
10728	Pyrene	129-00-0	0.025	0.0039	1
10728	Pyridine	110-86-1	N.D.	0.079	1
10728	Quinoline	91-22-5	N.D.	0.039	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	7.96	0.0852	1
06955	Lead	7439-92-1	11.1	0.537	1

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Analysis Report

Sample Description: AOI5-BH-16-064-8-10 Grab Soil
MHIC AOI5

LL Sample # SW 8413793
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 13:00 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH10

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	16.3	0.316	1
06971	Vanadium	7440-62-2	26.8	0.242	1
06972	Zinc	7440-66-6	39.3	0.810	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	Q161691AA	06/17/2016 10:58	Anita M Dale	187.63
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/06/2016 13:00	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/06/2016 13:00	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/06/2016 13:00	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/11/2016 01:03	Edward Monborne	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 17:34	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 17:34	Cindy M Gehman	1
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 17:34	Cindy M Gehman	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 17:34	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 17:34	Cindy M Gehman	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
00111	Moisture	SM 2540 G-1997	1	16162820001A	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-063-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413794
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 13:20 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH11

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.		0.029	47.16
10237	sec-Butylbenzene	135-98-8	0.38		0.058	47.16
10237	tert-Butylbenzene	98-06-6	0.11	J	0.058	47.16
10237	Cyclohexane	110-82-7	5.4		0.058	47.16
10237	1,2-Dibromoethane	106-93-4	N.D.		0.058	47.16
10237	1,2-Dichloroethane	107-06-2	N.D.		0.058	47.16
10237	Ethylbenzene	100-41-4	0.42		0.058	47.16
10237	n-Hexane	110-54-3	8.0		0.058	47.16
10237	Isopropylbenzene	98-82-8	0.55		0.058	47.16
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.029	47.16
10237	Naphthalene	91-20-3	0.16	J	0.058	47.16
10237	Toluene	108-88-3	N.D.		0.058	47.16
10237	1,2,4-Trimethylbenzene	95-63-6	1.8		0.058	47.16
10237	1,3,5-Trimethylbenzene	108-67-8	0.92		0.058	47.16
10237	Xylene (Total)	1330-20-7	0.37		0.058	47.16
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.		0.0041	1
10728	Anthracene	120-12-7	0.021	J	0.0041	1
10728	Benzo(a)anthracene	56-55-3	0.026		0.0041	1
10728	Benzo(a)pyrene	50-32-8	0.022		0.0041	1
10728	Benzo(b)fluoranthene	205-99-2	0.021		0.0041	1
10728	Benzo(g,h,i)perylene	191-24-2	0.060		0.0041	1
10728	Benzo(k)fluoranthene	207-08-9	0.0063	J	0.0041	1
10728	1,1'-Biphenyl	92-52-4	N.D.		0.020	1
10728	Di-n-butylphthalate	84-74-2	N.D.		0.082	1
10728	Chrysene	218-01-9	0.072		0.0041	1
10728	Dibenz(a,h)anthracene	53-70-3	0.0086	J	0.0041	1
10728	Diethylphthalate	84-66-2	N.D.		0.082	1
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.020	1
10728	2,4-Dinitrophenol	51-28-5	N.D.		0.37	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	0.084	J	0.082	1
10728	Fluoranthene	206-44-0	0.013	J	0.0041	1
10728	Fluorene	86-73-7	0.046		0.0041	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.017	J	0.0041	1
10728	2-Methylnaphthalene	91-57-6	0.043		0.0041	1
10728	2-Methylphenol	95-48-7	N.D.		0.020	1
10728	4-Methylphenol	106-44-5	N.D.		0.020	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.		0.20	1
10728	Phenanthrene	85-01-8	0.13		0.0041	1
10728	Phenol	108-95-2	N.D.		0.020	1
10728	Pyrene	129-00-0	0.080		0.0041	1
10728	Pyridine	110-86-1	N.D.		0.082	1
10728	Quinoline	91-22-5	N.D.		0.041	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	8.16		0.0820	1
06955	Lead	7439-92-1	21.1		0.516	1

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Analysis Report

Sample Description: AOI5-BH-16-063-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413794
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 13:20 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH11

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	23.9	0.304	1
06971	Vanadium	7440-62-2	51.4	0.233	1
06972	Zinc	7440-66-6	88.6	0.779	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	19.0	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	Q161691AA	06/17/2016 11:21	Anita M Dale	47.16
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/06/2016 13:20	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/06/2016 13:20	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/06/2016 13:20	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/11/2016 01:24	Edward Monborne	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 17:37	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 17:37	Cindy M Gehman	1
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 17:37	Cindy M Gehman	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 17:37	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 17:37	Cindy M Gehman	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
00111	Moisture	SM 2540 G-1997	1	16162820001B	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-063-6-8 Grab Soil
MHIC AOI5

LL Sample # SW 8413795
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 13:40 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH12

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	0.095	J	0.033	55.75
10237	sec-Butylbenzene	135-98-8	0.13	J	0.065	55.75
10237	tert-Butylbenzene	98-06-6	N.D.		0.065	55.75
10237	Cyclohexane	110-82-7	1.3		0.065	55.75
10237	1,2-Dibromoethane	106-93-4	N.D.		0.065	55.75
10237	1,2-Dichloroethane	107-06-2	N.D.		0.065	55.75
10237	Ethylbenzene	100-41-4	0.52		0.065	55.75
10237	n-Hexane	110-54-3	1.4		0.065	55.75
10237	Isopropylbenzene	98-82-8	0.18	J	0.065	55.75
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.033	55.75
10237	Naphthalene	91-20-3	0.36		0.065	55.75
10237	Toluene	108-88-3	0.25	J	0.065	55.75
10237	1,2,4-Trimethylbenzene	95-63-6	1.5		0.065	55.75
10237	1,3,5-Trimethylbenzene	108-67-8	0.77		0.065	55.75
10237	Xylene (Total)	1330-20-7	2.7		0.065	55.75
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.		0.0039	1
10728	Anthracene	120-12-7	0.018	J	0.0039	1
10728	Benzo(a)anthracene	56-55-3	0.0090	J	0.0039	1
10728	Benzo(a)pyrene	50-32-8	0.0083	J	0.0039	1
10728	Benzo(b)fluoranthene	205-99-2	0.0098	J	0.0039	1
10728	Benzo(g,h,i)perylene	191-24-2	0.0069	J	0.0039	1
10728	Benzo(k)fluoranthene	207-08-9	N.D.		0.0039	1
10728	1,1'-Biphenyl	92-52-4	0.035	J	0.019	1
10728	Di-n-butylphthalate	84-74-2	N.D.		0.077	1
10728	Chrysene	218-01-9	0.036		0.0039	1
10728	Dibenz(a,h)anthracene	53-70-3	N.D.		0.0039	1
10728	Diethylphthalate	84-66-2	N.D.		0.077	1
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.019	1
10728	2,4-Dinitrophenol	51-28-5	N.D.		0.35	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		0.077	1
10728	Fluoranthene	206-44-0	N.D.		0.0039	1
10728	Fluorene	86-73-7	0.049		0.0039	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.012	J	0.0039	1
10728	2-Methylnaphthalene	91-57-6	0.25		0.0039	1
10728	2-Methylphenol	95-48-7	N.D.		0.019	1
10728	4-Methylphenol	106-44-5	N.D.		0.019	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.		0.19	1
10728	Phenanthrene	85-01-8	0.14		0.0039	1
10728	Phenol	108-95-2	N.D.		0.019	1
10728	Pyrene	129-00-0	0.021		0.0039	1
10728	Pyridine	110-86-1	N.D.		0.077	1
10728	Quinoline	91-22-5	N.D.		0.039	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	4.97		0.0779	1
06955	Lead	7439-92-1	15.5		0.491	1

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Analysis Report

Sample Description: AOI5-BH-16-063-6-8 Grab Soil
MHIC AOI5

LL Sample # SW 8413795
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/06/2016 13:40 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH12

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	14.1	0.289	1
06971	Vanadium	7440-62-2	39.7	0.221	1
06972	Zinc	7440-66-6	70.9	0.741	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	14.8	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	R161681AA	06/16/2016 16:11	Anita M Dale	55.75
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/06/2016 13:40	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/06/2016 13:40	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/06/2016 13:40	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/11/2016 01:45	Edward Monborne	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 17:40	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 17:40	Cindy M Gehman	1
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 17:40	Cindy M Gehman	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 17:40	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 17:40	Cindy M Gehman	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
00111	Moisture	SM 2540 G-1997	1	16162820001B	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-061-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413796
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 07:45 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH13

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.	0.0006	0.98
10237	sec-Butylbenzene	135-98-8	N.D.	0.001	0.98
10237	tert-Butylbenzene	98-06-6	N.D.	0.001	0.98
10237	Cyclohexane	110-82-7	N.D.	0.001	0.98
10237	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.98
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.98
10237	Ethylbenzene	100-41-4	N.D.	0.001	0.98
10237	n-Hexane	110-54-3	N.D.	0.001	0.98
10237	Isopropylbenzene	98-82-8	N.D.	0.001	0.98
10237	Methyl Tertiary Butyl Ether	1634-04-4	0.001 J	0.0006	0.98
10237	Naphthalene	91-20-3	N.D.	0.001	0.98
10237	Toluene	108-88-3	N.D.	0.001	0.98
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.98
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.001	0.98
10237	Xylene (Total)	1330-20-7	N.D.	0.001	0.98
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.	0.0038	1
10728	Anthracene	120-12-7	N.D.	0.0038	1
10728	Benzo(a)anthracene	56-55-3	N.D.	0.0038	1
10728	Benzo(a)pyrene	50-32-8	N.D.	0.0038	1
10728	Benzo(b)fluoranthene	205-99-2	N.D.	0.0038	1
10728	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0038	1
10728	Benzo(k)fluoranthene	207-08-9	N.D.	0.0038	1
10728	1,1'-Biphenyl	92-52-4	N.D.	0.019	1
10728	Di-n-butylphthalate	84-74-2	N.D.	0.077	1
10728	Chrysene	218-01-9	N.D.	0.0038	1
10728	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0038	1
10728	Diethylphthalate	84-66-2	N.D.	0.077	1
10728	2,4-Dimethylphenol	105-67-9	N.D.	0.019	1
10728	2,4-Dinitrophenol	51-28-5	N.D.	0.35	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.077	1
10728	Fluoranthene	206-44-0	N.D.	0.0038	1
10728	Fluorene	86-73-7	N.D.	0.0038	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0038	1
10728	2-Methylnaphthalene	91-57-6	N.D.	0.0038	1
10728	2-Methylphenol	95-48-7	N.D.	0.019	1
10728	4-Methylphenol	106-44-5	N.D.	0.019	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.	0.19	1
10728	Phenanthrene	85-01-8	N.D.	0.0038	1
10728	Phenol	108-95-2	N.D.	0.019	1
10728	Pyrene	129-00-0	N.D.	0.0038	1
10728	Pyridine	110-86-1	N.D.	0.077	1
10728	Quinoline	91-22-5	N.D.	0.038	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	7.95	0.0764	1
06955	Lead	7439-92-1	13.6	0.481	1

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Analysis Report

Sample Description: AOI5-BH-16-061-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413796
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 07:45 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH13

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	18.4	0.283	1
06971	Vanadium	7440-62-2	31.9	0.217	1
06972	Zinc	7440-66-6	41.9	0.726	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	13.8	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	X161652AA	06/13/2016 17:47	Patrick T Herres	0.98
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/07/2016 07:45	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/07/2016 07:45	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/07/2016 07:45	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/11/2016 02:06	Edward Monborne	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 17:44	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 17:44	Cindy M Gehman	1
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 17:44	Cindy M Gehman	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 17:44	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 17:44	Cindy M Gehman	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
00111	Moisture	SM 2540 G-1997	1	16162820001B	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-061-10-11 Grab Soil
MHIC AOI5

LL Sample # SW 8413797
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 08:05 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH14

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	0.13		0.0005	0.91
10237	sec-Butylbenzene	135-98-8	0.001	J	0.001	0.91
10237	tert-Butylbenzene	98-06-6	0.002	J	0.001	0.91
10237	Cyclohexane	110-82-7	0.027		0.001	0.91
10237	1,2-Dibromoethane	106-93-4	N.D.		0.001	0.91
10237	1,2-Dichloroethane	107-06-2	N.D.		0.001	0.91
10237	Ethylbenzene	100-41-4	0.001	J	0.001	0.91
10237	n-Hexane	110-54-3	N.D.		0.001	0.91
10237	Isopropylbenzene	98-82-8	0.005	J	0.001	0.91
10237	Methyl Tertiary Butyl Ether	1634-04-4	0.002	J	0.0005	0.91
10237	Naphthalene	91-20-3	0.011		0.001	0.91
10237	Toluene	108-88-3	0.003	J	0.001	0.91
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.		0.001	0.91
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.		0.001	0.91
10237	Xylene (Total)	1330-20-7	0.004	J	0.001	0.91
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.		0.0040	1
10728	Anthracene	120-12-7	N.D.		0.0040	1
10728	Benzo(a)anthracene	56-55-3	N.D.		0.0040	1
10728	Benzo(a)pyrene	50-32-8	N.D.		0.0040	1
10728	Benzo(b)fluoranthene	205-99-2	N.D.		0.0040	1
10728	Benzo(g,h,i)perylene	191-24-2	N.D.		0.0040	1
10728	Benzo(k)fluoranthene	207-08-9	N.D.		0.0040	1
10728	1,1'-Biphenyl	92-52-4	N.D.		0.020	1
10728	Di-n-butylphthalate	84-74-2	N.D.		0.079	1
10728	Chrysene	218-01-9	N.D.		0.0040	1
10728	Dibenz(a,h)anthracene	53-70-3	N.D.		0.0040	1
10728	Diethylphthalate	84-66-2	N.D.		0.079	1
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.020	1
10728	2,4-Dinitrophenol	51-28-5	N.D.		0.36	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		0.079	1
10728	Fluoranthene	206-44-0	N.D.		0.0040	1
10728	Fluorene	86-73-7	N.D.		0.0040	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.0040	1
10728	2-Methylnaphthalene	91-57-6	N.D.		0.0040	1
10728	2-Methylphenol	95-48-7	N.D.		0.020	1
10728	4-Methylphenol	106-44-5	N.D.		0.020	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.		0.20	1
10728	Phenanthrene	85-01-8	N.D.		0.0040	1
10728	Phenol	108-95-2	N.D.		0.020	1
10728	Pyrene	129-00-0	N.D.		0.0040	1
10728	Pyridine	110-86-1	N.D.		0.079	1
10728	Quinoline	91-22-5	N.D.		0.040	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	4.24		0.0856	1
06955	Lead	7439-92-1	6.98		0.539	1

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Analysis Report

Sample Description: AOI5-BH-16-061-10-11 Grab Soil
MHIC AOI5

LL Sample # SW 8413797
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 08:05 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH14

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	10.1	0.317	1
06971	Vanadium	7440-62-2	15.5	0.243	1
06972	Zinc	7440-66-6	27.4	0.814	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	16.3	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	X161641AA	06/12/2016 14:56	Angela D Sneeringer	0.91
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/07/2016 08:05	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/07/2016 08:05	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/07/2016 08:05	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/11/2016 02:27	Edward Monborne	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 17:54	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 17:54	Cindy M Gehman	1
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 17:54	Cindy M Gehman	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 17:54	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 17:54	Cindy M Gehman	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
00111	Moisture	SM 2540 G-1997	1	16162820001B	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-060-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413798
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 08:30 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH15

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	0.002 J	0.0005	0.91
10237	sec-Butylbenzene	135-98-8	N.D.	0.001	0.91
10237	tert-Butylbenzene	98-06-6	N.D.	0.001	0.91
10237	Cyclohexane	110-82-7	0.021	0.001	0.91
10237	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.91
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.91
10237	Ethylbenzene	100-41-4	N.D.	0.001	0.91
10237	n-Hexane	110-54-3	0.008	0.001	0.91
10237	Isopropylbenzene	98-82-8	N.D.	0.001	0.91
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.91
10237	Naphthalene	91-20-3	N.D.	0.001	0.91
10237	Toluene	108-88-3	N.D.	0.001	0.91
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.91
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.001	0.91
10237	Xylene (Total)	1330-20-7	N.D.	0.001	0.91
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.	0.0038	1
10728	Anthracene	120-12-7	N.D.	0.0038	1
10728	Benzo(a)anthracene	56-55-3	N.D.	0.0038	1
10728	Benzo(a)pyrene	50-32-8	N.D.	0.0038	1
10728	Benzo(b)fluoranthene	205-99-2	N.D.	0.0038	1
10728	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0038	1
10728	Benzo(k)fluoranthene	207-08-9	N.D.	0.0038	1
10728	1,1'-Biphenyl	92-52-4	N.D.	0.019	1
10728	Di-n-butylphthalate	84-74-2	N.D.	0.077	1
10728	Chrysene	218-01-9	N.D.	0.0038	1
10728	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0038	1
10728	Diethylphthalate	84-66-2	N.D.	0.077	1
10728	2,4-Dimethylphenol	105-67-9	N.D.	0.019	1
10728	2,4-Dinitrophenol	51-28-5	N.D.	0.35	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.077	1
10728	Fluoranthene	206-44-0	N.D.	0.0038	1
10728	Fluorene	86-73-7	N.D.	0.0038	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0038	1
10728	2-Methylnaphthalene	91-57-6	N.D.	0.0038	1
10728	2-Methylphenol	95-48-7	N.D.	0.019	1
10728	4-Methylphenol	106-44-5	N.D.	0.019	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.	0.19	1
10728	Phenanthrene	85-01-8	N.D.	0.0038	1
10728	Phenol	108-95-2	N.D.	0.019	1
10728	Pyrene	129-00-0	N.D.	0.0038	1
10728	Pyridine	110-86-1	N.D.	0.077	1
10728	Quinoline	91-22-5	N.D.	0.038	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	4.46	0.0723	1
06955	Lead	7439-92-1	14.7	0.455	1

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Analysis Report

Sample Description: AOI5-BH-16-060-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413798
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 08:30 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH15

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	12.7	0.268	1
06971	Vanadium	7440-62-2	57.0	0.205	1
06972	Zinc	7440-66-6	32.8	0.687	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	13.8	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	X161641AA	06/12/2016 15:19	Angela D Sneeringer	0.91
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/07/2016 08:30	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/07/2016 08:30	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/07/2016 08:30	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/11/2016 02:49	Edward Monborne	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 17:57	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 17:57	Cindy M Gehman	1
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 17:57	Cindy M Gehman	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 17:57	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 17:57	Cindy M Gehman	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
00111	Moisture	SM 2540 G-1997	1	16162820001B	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-060-8-10 Grab Soil
MHIC AOI5

LL Sample # SW 8413799
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 08:50 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH16

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	0.19	J	0.10	182.7
10237	sec-Butylbenzene	135-98-8	0.47	J	0.21	182.7
10237	tert-Butylbenzene	98-06-6	0.40	J	0.21	182.7
10237	Cyclohexane	110-82-7	5.4		0.21	182.7
10237	1,2-Dibromoethane	106-93-4	N.D.		0.21	182.7
10237	1,2-Dichloroethane	107-06-2	N.D.		0.21	182.7
10237	Ethylbenzene	100-41-4	2.6		0.21	182.7
10237	n-Hexane	110-54-3	12		0.21	182.7
10237	Isopropylbenzene	98-82-8	0.89	J	0.21	182.7
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.10	182.7
10237	Naphthalene	91-20-3	2.0		0.21	182.7
10237	Toluene	108-88-3	N.D.		0.21	182.7
10237	1,2,4-Trimethylbenzene	95-63-6	7.4		0.21	182.7
10237	1,3,5-Trimethylbenzene	108-67-8	3.7		0.21	182.7
10237	Xylene (Total)	1330-20-7	5.2		0.21	182.7
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.		0.0038	1
10728	Anthracene	120-12-7	N.D.		0.0038	1
10728	Benzo(a)anthracene	56-55-3	N.D.		0.0038	1
10728	Benzo(a)pyrene	50-32-8	N.D.		0.0038	1
10728	Benzo(b)fluoranthene	205-99-2	N.D.		0.0038	1
10728	Benzo(g,h,i)perylene	191-24-2	N.D.		0.0038	1
10728	Benzo(k)fluoranthene	207-08-9	N.D.		0.0038	1
10728	1,1'-Biphenyl	92-52-4	0.065		0.019	1
10728	Di-n-butylphthalate	84-74-2	N.D.		0.076	1
10728	Chrysene	218-01-9	N.D.		0.0038	1
10728	Dibenz(a,h)anthracene	53-70-3	N.D.		0.0038	1
10728	Diethylphthalate	84-66-2	N.D.		0.076	1
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.019	1
10728	2,4-Dinitrophenol	51-28-5	N.D.		0.34	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		0.076	1
10728	Fluoranthene	206-44-0	N.D.		0.0038	1
10728	Fluorene	86-73-7	N.D.		0.0038	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.0038	1
10728	2-Methylnaphthalene	91-57-6	0.97		0.0038	1
10728	2-Methylphenol	95-48-7	N.D.		0.019	1
10728	4-Methylphenol	106-44-5	N.D.		0.019	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.		0.19	1
10728	Phenanthrene	85-01-8	N.D.		0.0038	1
10728	Phenol	108-95-2	N.D.		0.019	1
10728	Pyrene	129-00-0	N.D.		0.0038	1
10728	Pyridine	110-86-1	N.D.		0.076	1
10728	Quinoline	91-22-5	N.D.		0.038	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06952	Cobalt	7440-48-4	6.67		0.0903	1
06955	Lead	7439-92-1	8.97		0.568	1

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Analysis Report

Sample Description: AOI5-BH-16-060-8-10 Grab Soil
MHIC AOI5

LL Sample # SW 8413799
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 08:50 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH16

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	13.2	0.334	1
06971	Vanadium	7440-62-2	22.0	0.256	1
06972	Zinc	7440-66-6	34.5	0.858	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	12.9	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	Q161691AA	06/17/2016 11:43	Anita M Dale	182.7
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/07/2016 08:50	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/07/2016 08:50	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/07/2016 08:50	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/11/2016 03:10	Edward Monborne	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 18:00	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 18:00	Cindy M Gehman	1
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 18:00	Cindy M Gehman	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 18:00	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 18:00	Cindy M Gehman	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
00111	Moisture	SM 2540 G-1997	1	16162820001B	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-059-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413800
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 09:35 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH17

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.	0.0005	0.87
10237	sec-Butylbenzene	135-98-8	N.D.	0.001	0.87
10237	tert-Butylbenzene	98-06-6	N.D.	0.001	0.87
10237	Cyclohexane	110-82-7	N.D.	0.001	0.87
10237	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.87
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.87
10237	Ethylbenzene	100-41-4	N.D.	0.001	0.87
10237	n-Hexane	110-54-3	N.D.	0.001	0.87
10237	Isopropylbenzene	98-82-8	N.D.	0.001	0.87
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.87
10237	Naphthalene	91-20-3	N.D.	0.001	0.87
10237	Toluene	108-88-3	N.D.	0.001	0.87
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.87
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.001	0.87
10237	Xylene (Total)	1330-20-7	N.D.	0.001	0.87
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.	0.0039	1
10728	Anthracene	120-12-7	N.D.	0.0039	1
10728	Benzo(a)anthracene	56-55-3	0.0052 J	0.0039	1
10728	Benzo(a)pyrene	50-32-8	0.0058 J	0.0039	1
10728	Benzo(b)fluoranthene	205-99-2	0.0090 J	0.0039	1
10728	Benzo(g,h,i)perylene	191-24-2	0.012 J	0.0039	1
10728	Benzo(k)fluoranthene	207-08-9	N.D.	0.0039	1
10728	1,1'-Biphenyl	92-52-4	N.D.	0.020	1
10728	Di-n-butylphthalate	84-74-2	N.D.	0.079	1
10728	Chrysene	218-01-9	0.011 J	0.0039	1
10728	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0039	1
10728	Diethylphthalate	84-66-2	N.D.	0.079	1
10728	2,4-Dimethylphenol	105-67-9	N.D.	0.020	1
10728	2,4-Dinitrophenol	51-28-5	N.D.	0.35	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.079	1
10728	Fluoranthene	206-44-0	0.0063 J	0.0039	1
10728	Fluorene	86-73-7	N.D.	0.0039	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.0048 J	0.0039	1
10728	2-Methylnaphthalene	91-57-6	0.0077 J	0.0039	1
10728	2-Methylphenol	95-48-7	N.D.	0.020	1
10728	4-Methylphenol	106-44-5	N.D.	0.020	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.	0.20	1
10728	Phenanthrene	85-01-8	0.010 J	0.0039	1
10728	Phenol	108-95-2	N.D.	0.020	1
10728	Pyrene	129-00-0	0.011 J	0.0039	1
10728	Pyridine	110-86-1	N.D.	0.079	1
10728	Quinoline	91-22-5	N.D.	0.039	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	7.02	0.0715	1
06955	Lead	7439-92-1	16.3	0.450	1

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Analysis Report

Sample Description: AOI5-BH-16-059-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413800
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 09:35 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH17

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	12.6	0.265	1
06971	Vanadium	7440-62-2	45.3	0.203	1
06972	Zinc	7440-66-6	37.6	0.680	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	15.5	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	X161652AA	06/13/2016 16:14	Patrick T Herres	0.87
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/07/2016 09:35	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/07/2016 09:35	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/07/2016 09:35	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/11/2016 03:31	Edward Monborne	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 18:03	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 18:03	Cindy M Gehman	1
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 18:03	Cindy M Gehman	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 18:03	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 18:03	Cindy M Gehman	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
00111	Moisture	SM 2540 G-1997	1	16162820001B	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-059-8-10 Grab Soil
MHIC AOI5

LL Sample # SW 8413801
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 09:55 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH18

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.	0.0006	0.95
10237	sec-Butylbenzene	135-98-8	N.D.	0.001	0.95
10237	tert-Butylbenzene	98-06-6	N.D.	0.001	0.95
10237	Cyclohexane	110-82-7	0.026	0.001	0.95
10237	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.95
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.95
10237	Ethylbenzene	100-41-4	N.D.	0.001	0.95
10237	n-Hexane	110-54-3	0.025	0.001	0.95
10237	Isopropylbenzene	98-82-8	N.D.	0.001	0.95
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	0.95
10237	Naphthalene	91-20-3	N.D.	0.001	0.95
10237	Toluene	108-88-3	N.D.	0.001	0.95
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.95
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.001	0.95
10237	Xylene (Total)	1330-20-7	N.D.	0.001	0.95
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.	0.0039	1
10728	Anthracene	120-12-7	N.D.	0.0039	1
10728	Benzo(a)anthracene	56-55-3	N.D.	0.0039	1
10728	Benzo(a)pyrene	50-32-8	N.D.	0.0039	1
10728	Benzo(b)fluoranthene	205-99-2	N.D.	0.0039	1
10728	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0039	1
10728	Benzo(k)fluoranthene	207-08-9	N.D.	0.0039	1
10728	1,1'-Biphenyl	92-52-4	N.D.	0.019	1
10728	Di-n-butylphthalate	84-74-2	N.D.	0.077	1
10728	Chrysene	218-01-9	N.D.	0.0039	1
10728	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0039	1
10728	Diethylphthalate	84-66-2	N.D.	0.077	1
10728	2,4-Dimethylphenol	105-67-9	N.D.	0.019	1
10728	2,4-Dinitrophenol	51-28-5	N.D.	0.35	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.077	1
10728	Fluoranthene	206-44-0	N.D.	0.0039	1
10728	Fluorene	86-73-7	N.D.	0.0039	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0039	1
10728	2-Methylnaphthalene	91-57-6	N.D.	0.0039	1
10728	2-Methylphenol	95-48-7	N.D.	0.019	1
10728	4-Methylphenol	106-44-5	N.D.	0.019	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.	0.19	1
10728	Phenanthrene	85-01-8	N.D.	0.0039	1
10728	Phenol	108-95-2	N.D.	0.019	1
10728	Pyrene	129-00-0	N.D.	0.0039	1
10728	Pyridine	110-86-1	N.D.	0.077	1
10728	Quinoline	91-22-5	N.D.	0.039	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	6.20	0.0824	1
06955	Lead	7439-92-1	11.6	0.519	1

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Analysis Report

Sample Description: AOI5-BH-16-059-8-10 Grab Soil
MHIC AOI5

LL Sample # SW 8413801
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 09:55 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH18

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	12.9	0.305	1
06971	Vanadium	7440-62-2	32.9	0.234	1
06972	Zinc	7440-66-6	40.3	0.783	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	X161652AA	06/13/2016 16:37	Patrick T Herres	0.95
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/07/2016 09:55	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/07/2016 09:55	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/07/2016 09:55	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/11/2016 03:52	Edward Monborne	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 18:07	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 18:07	Cindy M Gehman	1
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 18:07	Cindy M Gehman	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 18:07	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 18:07	Cindy M Gehman	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
00111	Moisture	SM 2540 G-1997	1	16162820001B	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-058-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413802
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 10:20 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH19

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	0.0007 J	0.0005	0.88
10237	sec-Butylbenzene	135-98-8	N.D.	0.001	0.88
10237	tert-Butylbenzene	98-06-6	N.D.	0.001	0.88
10237	Cyclohexane	110-82-7	N.D.	0.001	0.88
10237	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.88
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.88
10237	Ethylbenzene	100-41-4	N.D.	0.001	0.88
10237	n-Hexane	110-54-3	N.D.	0.001	0.88
10237	Isopropylbenzene	98-82-8	N.D.	0.001	0.88
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.88
10237	Naphthalene	91-20-3	N.D.	0.001	0.88
10237	Toluene	108-88-3	N.D.	0.001	0.88
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.88
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.001	0.88
10237	Xylene (Total)	1330-20-7	N.D.	0.001	0.88
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.	0.0039	1
10728	Anthracene	120-12-7	N.D.	0.0039	1
10728	Benzo(a)anthracene	56-55-3	N.D.	0.0039	1
10728	Benzo(a)pyrene	50-32-8	N.D.	0.0039	1
10728	Benzo(b)fluoranthene	205-99-2	N.D.	0.0039	1
10728	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0039	1
10728	Benzo(k)fluoranthene	207-08-9	N.D.	0.0039	1
10728	1,1'-Biphenyl	92-52-4	N.D.	0.020	1
10728	Di-n-butylphthalate	84-74-2	N.D.	0.078	1
10728	Chrysene	218-01-9	N.D.	0.0039	1
10728	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0039	1
10728	Diethylphthalate	84-66-2	N.D.	0.078	1
10728	2,4-Dimethylphenol	105-67-9	N.D.	0.020	1
10728	2,4-Dinitrophenol	51-28-5	N.D.	0.35	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.078	1
10728	Fluoranthene	206-44-0	N.D.	0.0039	1
10728	Fluorene	86-73-7	N.D.	0.0039	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0039	1
10728	2-Methylnaphthalene	91-57-6	N.D.	0.0039	1
10728	2-Methylphenol	95-48-7	N.D.	0.020	1
10728	4-Methylphenol	106-44-5	N.D.	0.020	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.	0.20	1
10728	Phenanthrene	85-01-8	N.D.	0.0039	1
10728	Phenol	108-95-2	N.D.	0.020	1
10728	Pyrene	129-00-0	N.D.	0.0039	1
10728	Pyridine	110-86-1	N.D.	0.078	1
10728	Quinoline	91-22-5	N.D.	0.039	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	6.98	0.0904	1
06955	Lead	7439-92-1	9.46	0.569	1

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Analysis Report

Sample Description: AOI5-BH-16-058-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413802
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 10:20 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH19

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	14.0	0.335	1
06971	Vanadium	7440-62-2	20.2	0.257	1
06972	Zinc	7440-66-6	39.0	0.860	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	15.5	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	X161692AA	06/17/2016 13:40	Patrick T Herres	0.88
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/07/2016 10:20	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/07/2016 10:20	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/07/2016 10:20	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/11/2016 04:13	Edward Monborne	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 18:10	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 18:10	Cindy M Gehman	1
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 18:10	Cindy M Gehman	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 18:10	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 18:10	Cindy M Gehman	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
00111	Moisture	SM 2540 G-1997	1	16162820001B	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-058-3-4 Grab Soil
MHIC AOI5

LL Sample # SW 8413803
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 10:40 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

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1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH20

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.	0.0006	0.9
10237	sec-Butylbenzene	135-98-8	N.D.	0.001	0.9
10237	tert-Butylbenzene	98-06-6	N.D.	0.001	0.9
10237	Cyclohexane	110-82-7	N.D.	0.001	0.9
10237	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.9
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.9
10237	Ethylbenzene	100-41-4	N.D.	0.001	0.9
10237	n-Hexane	110-54-3	0.002 J	0.001	0.9
10237	Isopropylbenzene	98-82-8	0.001 J	0.001	0.9
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	0.9
10237	Naphthalene	91-20-3	N.D.	0.001	0.9
10237	Toluene	108-88-3	N.D.	0.001	0.9
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.9
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.001	0.9
10237	Xylene (Total)	1330-20-7	N.D.	0.001	0.9
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.	0.0040	1
10728	Anthracene	120-12-7	N.D.	0.0040	1
10728	Benzo(a)anthracene	56-55-3	N.D.	0.0040	1
10728	Benzo(a)pyrene	50-32-8	N.D.	0.0040	1
10728	Benzo(b)fluoranthene	205-99-2	N.D.	0.0040	1
10728	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0040	1
10728	Benzo(k)fluoranthene	207-08-9	N.D.	0.0040	1
10728	1,1'-Biphenyl	92-52-4	N.D.	0.020	1
10728	Di-n-butylphthalate	84-74-2	N.D.	0.081	1
10728	Chrysene	218-01-9	N.D.	0.0040	1
10728	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0040	1
10728	Diethylphthalate	84-66-2	N.D.	0.081	1
10728	2,4-Dimethylphenol	105-67-9	N.D.	0.020	1
10728	2,4-Dinitrophenol	51-28-5	N.D.	0.36	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.081	1
10728	Fluoranthene	206-44-0	N.D.	0.0040	1
10728	Fluorene	86-73-7	N.D.	0.0040	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0040	1
10728	2-Methylnaphthalene	91-57-6	N.D.	0.0040	1
10728	2-Methylphenol	95-48-7	N.D.	0.020	1
10728	4-Methylphenol	106-44-5	N.D.	0.020	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.	0.20	1
10728	Phenanthrene	85-01-8	N.D.	0.0040	1
10728	Phenol	108-95-2	N.D.	0.020	1
10728	Pyrene	129-00-0	N.D.	0.0040	1
10728	Pyridine	110-86-1	N.D.	0.081	1
10728	Quinoline	91-22-5	N.D.	0.040	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	8.82	0.0723	1
06955	Lead	7439-92-1	11.5	0.455	1

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Analysis Report

Sample Description: AOI5-BH-16-058-3-4 Grab Soil
MHIC AOI5

LL Sample # SW 8413803
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 10:40 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH20

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	20.3	0.268	1
06971	Vanadium	7440-62-2	30.6	0.205	1
06972	Zinc	7440-66-6	49.8	0.687	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	18.8	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	X161652AA	06/13/2016 17:00	Patrick T Herres	0.9
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/07/2016 10:40	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/07/2016 10:40	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/07/2016 10:40	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16160SLG026	06/11/2016 04:35	Edward Monborne	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16160SLG026	06/09/2016 08:30	David S Schrum	1
06952	Cobalt	SW-846 6010B	1	161635708002	06/16/2016 18:13	Cindy M Gehman	1
06955	Lead	SW-846 6010B	1	161635708002	06/16/2016 18:13	Cindy M Gehman	1
06961	Nickel	SW-846 6010B	1	161635708002	06/16/2016 18:13	Cindy M Gehman	1
06971	Vanadium	SW-846 6010B	1	161635708002	06/16/2016 18:13	Cindy M Gehman	1
06972	Zinc	SW-846 6010B	1	161635708002	06/16/2016 18:13	Cindy M Gehman	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161635708002	06/13/2016 05:30	Lisa J Cooke	1
00111	Moisture	SM 2540 G-1997	1	16162820001B	06/10/2016 10:50	William C Schwebel	1

Sample Description: AOI5-BH-16-057-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413804
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 11:00 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH21

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.	0.0006	0.96
10237	sec-Butylbenzene	135-98-8	N.D.	0.001	0.96
10237	tert-Butylbenzene	98-06-6	N.D.	0.001	0.96
10237	Cyclohexane	110-82-7	N.D.	0.001	0.96
10237	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.96
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.96
10237	Ethylbenzene	100-41-4	N.D.	0.001	0.96
10237	n-Hexane	110-54-3	N.D.	0.001	0.96
10237	Isopropylbenzene	98-82-8	N.D.	0.001	0.96
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	0.96
10237	Naphthalene	91-20-3	N.D.	0.001	0.96
10237	Toluene	108-88-3	N.D.	0.001	0.96
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.96
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.001	0.96
10237	Xylene (Total)	1330-20-7	N.D.	0.001	0.96
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
10728	Acenaphthene	83-32-9	0.0091 J	0.0039	1
10728	Anthracene	120-12-7	0.013 J	0.0039	1
10728	Benzo(a)anthracene	56-55-3	0.036	0.0039	1
10728	Benzo(a)pyrene	50-32-8	0.031	0.0039	1
10728	Benzo(b)fluoranthene	205-99-2	0.047	0.0039	1
10728	Benzo(g,h,i)perylene	191-24-2	0.040	0.0039	1
10728	Benzo(k)fluoranthene	207-08-9	0.020	0.0039	1
10728	1,1'-Biphenyl	92-52-4	N.D.	0.019	1
10728	Di-n-butylphthalate	84-74-2	N.D.	0.077	1
10728	Chrysene	218-01-9	0.049	0.0039	1
10728	Dibenz(a,h)anthracene	53-70-3	0.0084 J	0.0039	1
10728	Diethylphthalate	84-66-2	N.D.	0.077	1
10728	2,4-Dimethylphenol	105-67-9	N.D.	0.019	1
10728	2,4-Dinitrophenol	51-28-5	N.D.	0.35	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.077	1
10728	Fluoranthene	206-44-0	0.059	0.0039	1
10728	Fluorene	86-73-7	0.030	0.0039	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.022	0.0039	1
10728	2-Methylnaphthalene	91-57-6	0.054	0.0039	1
10728	2-Methylphenol	95-48-7	N.D.	0.019	1
10728	4-Methylphenol	106-44-5	N.D.	0.019	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.	0.19	1
10728	Phenanthrene	85-01-8	0.055	0.0039	1
10728	Phenol	108-95-2	N.D.	0.019	1
10728	Pyrene	129-00-0	0.069	0.0039	1
10728	Pyridine	110-86-1	N.D.	0.077	1
10728	Quinoline	91-22-5	N.D.	0.039	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	6.39	0.0793	1
06955	Lead	7439-92-1	42.4	0.500	1

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Analysis Report

Sample Description: AOI5-BH-16-057-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413804
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 11:00 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH21

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	10.2	0.294	1
06971	Vanadium	7440-62-2	37.9	0.225	1
06972	Zinc	7440-66-6	44.7	0.754	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	X161652AA	06/13/2016 18:10	Patrick T Herres	0.96
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/07/2016 11:00	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/07/2016 11:00	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/07/2016 11:00	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16162SLC026	06/14/2016 09:31	Linda M Hartenstine	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16162SLC026	06/13/2016 09:15	Michelle A Newswanger	1
06952	Cobalt	SW-846 6010B	1	161605708007	06/09/2016 10:00	Joanne M Gates	1
06955	Lead	SW-846 6010B	1	161605708007	06/09/2016 10:00	Joanne M Gates	1
06961	Nickel	SW-846 6010B	1	161605708007	06/12/2016 08:42	Eric L Eby	1
06971	Vanadium	SW-846 6010B	1	161605708007	06/09/2016 10:00	Joanne M Gates	1
06972	Zinc	SW-846 6010B	1	161605708007	06/09/2016 10:00	Joanne M Gates	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161605708007	06/08/2016 22:16	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-1997	1	16162820002A	06/10/2016 11:54	William C Schwebel	1

Sample Description: AOI5-BH-16-057-7-8 Grab Soil
MHIC AOI5

LL Sample # SW 8413805
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 11:25 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH22

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.	0.0006	1.02
10237	sec-Butylbenzene	135-98-8	N.D.	0.001	1.02
10237	tert-Butylbenzene	98-06-6	N.D.	0.001	1.02
10237	Cyclohexane	110-82-7	N.D.	0.001	1.02
10237	1,2-Dibromoethane	106-93-4	N.D.	0.001	1.02
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	1.02
10237	Ethylbenzene	100-41-4	N.D.	0.001	1.02
10237	n-Hexane	110-54-3	N.D.	0.001	1.02
10237	Isopropylbenzene	98-82-8	N.D.	0.001	1.02
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	1.02
10237	Naphthalene	91-20-3	N.D.	0.001	1.02
10237	Toluene	108-88-3	N.D.	0.001	1.02
10237	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	1.02
10237	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.001	1.02
10237	Xylene (Total)	1330-20-7	N.D.	0.001	1.02
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
10728	Acenaphthene	83-32-9	N.D.	0.0038	1
10728	Anthracene	120-12-7	N.D.	0.0038	1
10728	Benzo(a)anthracene	56-55-3	N.D.	0.0038	1
10728	Benzo(a)pyrene	50-32-8	N.D.	0.0038	1
10728	Benzo(b)fluoranthene	205-99-2	N.D.	0.0038	1
10728	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0038	1
10728	Benzo(k)fluoranthene	207-08-9	N.D.	0.0038	1
10728	1,1'-Biphenyl	92-52-4	N.D.	0.019	1
10728	Di-n-butylphthalate	84-74-2	N.D.	0.077	1
10728	Chrysene	218-01-9	N.D.	0.0038	1
10728	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0038	1
10728	Diethylphthalate	84-66-2	N.D.	0.077	1
10728	2,4-Dimethylphenol	105-67-9	N.D.	0.019	1
10728	2,4-Dinitrophenol	51-28-5	N.D.	0.35	1
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.077	1
10728	Fluoranthene	206-44-0	N.D.	0.0038	1
10728	Fluorene	86-73-7	N.D.	0.0038	1
10728	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0038	1
10728	2-Methylnaphthalene	91-57-6	N.D.	0.0038	1
10728	2-Methylphenol	95-48-7	N.D.	0.019	1
10728	4-Methylphenol	106-44-5	N.D.	0.019	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.	0.19	1
10728	Phenanthrene	85-01-8	N.D.	0.0038	1
10728	Phenol	108-95-2	N.D.	0.019	1
10728	Pyrene	129-00-0	N.D.	0.0038	1
10728	Pyridine	110-86-1	N.D.	0.077	1
10728	Quinoline	91-22-5	N.D.	0.038	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	0.716	0.0833	1
06955	Lead	7439-92-1	1.10 J	0.524	1

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Analysis Report

Sample Description: AOI5-BH-16-057-7-8 Grab Soil
MHIC AOI5

LL Sample # SW 8413805
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 11:25 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH22

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	1.30	0.308	1
06971	Vanadium	7440-62-2	6.78	0.236	1
06972	Zinc	7440-66-6	6.16	0.791	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	X161692AA	06/17/2016 13:17	Patrick T Herres	1.02
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/07/2016 11:25	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/07/2016 11:25	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/07/2016 11:25	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16162SLC026	06/14/2016 09:52	Linda M Hartenstine	1
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16162SLC026	06/13/2016 09:15	Michelle A Newswanger	1
06952	Cobalt	SW-846 6010B	1	161605708007	06/09/2016 11:24	Joanne M Gates	1
06955	Lead	SW-846 6010B	1	161605708007	06/09/2016 11:24	Joanne M Gates	1
06961	Nickel	SW-846 6010B	1	161605708007	06/12/2016 09:42	Eric L Eby	1
06971	Vanadium	SW-846 6010B	1	161605708007	06/09/2016 11:24	Joanne M Gates	1
06972	Zinc	SW-846 6010B	1	161605708007	06/09/2016 11:24	Joanne M Gates	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161605708007	06/08/2016 22:16	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-1997	1	16162820002A	06/10/2016 11:54	William C Schwebel	1

Sample Description: AOI5-BH-16-056-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413806
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 12:15 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH23

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	0.30	J	0.15	252.79
10237	sec-Butylbenzene	135-98-8	5.2		0.31	252.79
10237	tert-Butylbenzene	98-06-6	1.6		0.31	252.79
10237	Cyclohexane	110-82-7	5.6		0.31	252.79
10237	1,2-Dibromoethane	106-93-4	N.D.		0.31	252.79
10237	1,2-Dichloroethane	107-06-2	N.D.		0.31	252.79
10237	Ethylbenzene	100-41-4	5.9		0.31	252.79
10237	n-Hexane	110-54-3	0.98	J	0.31	252.79
10237	Isopropylbenzene	98-82-8	5.5		0.31	252.79
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.15	252.79
10237	Naphthalene	91-20-3	17		0.31	252.79
10237	Toluene	108-88-3	0.83	J	0.31	252.79
10237	1,2,4-Trimethylbenzene	95-63-6	59		0.31	252.79
10237	1,3,5-Trimethylbenzene	108-67-8	42		0.31	252.79
10237	Xylene (Total)	1330-20-7	36		0.31	252.79
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	6.5		0.10	5
10728	Anthracene	120-12-7	6.2		0.10	5
10728	Benzo(a)anthracene	56-55-3	4.2		0.10	5
10728	Benzo(a)pyrene	50-32-8	3.8		0.10	5
10728	Benzo(b)fluoranthene	205-99-2	4.2		0.10	5
10728	Benzo(g,h,i)perylene	191-24-2	1.9		0.10	5
10728	Benzo(k)fluoranthene	207-08-9	0.70		0.10	5
10728	1,1'-Biphenyl	92-52-4	2.7		0.51	5
10728	Di-n-butylphthalate	84-74-2	N.D.		2.0	5
10728	Chrysene	218-01-9	11		0.10	5
10728	Dibenz(a,h)anthracene	53-70-3	0.67		0.10	5
10728	Diethylphthalate	84-66-2	N.D.		2.0	5
10728	2,4-Dimethylphenol	105-67-9	N.D.		0.51	5
10728	2,4-Dinitrophenol	51-28-5	N.D.		9.2	5
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		2.0	5
10728	Fluoranthene	206-44-0	6.5		0.10	5
10728	Fluorene	86-73-7	12		0.10	5
10728	Indeno(1,2,3-cd)pyrene	193-39-5	0.72		0.10	5
10728	2-Methylnaphthalene	91-57-6	140		0.20	10
10728	2-Methylphenol	95-48-7	N.D.		0.51	5
10728	4-Methylphenol	106-44-5	N.D.		0.51	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.		5.1	5
10728	Phenanthrene	85-01-8	30		0.10	5
10728	Phenol	108-95-2	N.D.		0.51	5
10728	Pyrene	129-00-0	16		0.10	5
10728	Pyridine	110-86-1	N.D.		2.0	5
10728	Quinoline	91-22-5	N.D.		1.0	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	6.33		0.0894	1

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Lancaster Laboratories Environmental
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Analysis Report

Sample Description: AOI5-BH-16-056-0-2 Grab Soil
MHIC AOI5

LL Sample # SW 8413806
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 12:15 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH23

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	104	0.563	1
06961	Nickel	7440-02-0	12.7	0.331	1
06971	Vanadium	7440-62-2	26.9	0.254	1
06972	Zinc	7440-66-6	107	0.850	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	18.4	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	R161681AA	06/16/2016 17:21	Anita M Dale	252.79
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/07/2016 12:15	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/07/2016 12:15	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/07/2016 12:15	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16162SLC026	06/14/2016 10:13	Linda M Hartenstine	5
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16162SLC026	06/17/2016 09:46	Linda M Hartenstine	10
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16162SLC026	06/13/2016 09:15	Michelle A Newswanger	1
06952	Cobalt	SW-846 6010B	1	161605708007	06/09/2016 11:28	Joanne M Gates	1
06955	Lead	SW-846 6010B	1	161605708007	06/09/2016 11:28	Joanne M Gates	1
06961	Nickel	SW-846 6010B	1	161605708007	06/12/2016 09:45	Eric L Eby	1
06971	Vanadium	SW-846 6010B	1	161605708007	06/09/2016 11:28	Joanne M Gates	1
06972	Zinc	SW-846 6010B	1	161605708007	06/09/2016 11:28	Joanne M Gates	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161605708007	06/08/2016 22:16	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-1997	1	16162820002A	06/10/2016 11:54	William C Schwebel	1

Sample Description: AOI5-BH-16-056-2-4 Grab Soil
MHIC AOI5

LL Sample # SW 8413807
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 12:40 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH24

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.		0.29	428.05
10237	sec-Butylbenzene	135-98-8	0.58	J	0.58	428.05
10237	tert-Butylbenzene	98-06-6	N.D.		0.58	428.05
10237	Cyclohexane	110-82-7	0.75	J	0.58	428.05
10237	1,2-Dibromoethane	106-93-4	N.D.		0.58	428.05
10237	1,2-Dichloroethane	107-06-2	N.D.		0.58	428.05
10237	Ethylbenzene	100-41-4	0.69	J	0.58	428.05
10237	n-Hexane	110-54-3	N.D.		0.58	428.05
10237	Isopropylbenzene	98-82-8	N.D.		0.58	428.05
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.29	428.05
10237	Naphthalene	91-20-3	6.0		0.58	428.05
10237	Toluene	108-88-3	N.D.		0.58	428.05
10237	1,2,4-Trimethylbenzene	95-63-6	6.6		0.58	428.05
10237	1,3,5-Trimethylbenzene	108-67-8	3.7		0.58	428.05
10237	Xylene (Total)	1330-20-7	4.3		0.58	428.05
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
10728	Acenaphthene	83-32-9	6.0		0.22	5
10728	Anthracene	120-12-7	11		0.22	5
10728	Benzo(a)anthracene	56-55-3	29		0.22	5
10728	Benzo(a)pyrene	50-32-8	24		0.22	5
10728	Benzo(b)fluoranthene	205-99-2	17		0.22	5
10728	Benzo(g,h,i)perylene	191-24-2	9.8		0.22	5
10728	Benzo(k)fluoranthene	207-08-9	2.7		0.22	5
10728	1,1'-Biphenyl	92-52-4	3.9		1.1	5
10728	Di-n-butylphthalate	84-74-2	N.D.		4.5	5
10728	Chrysene	218-01-9	56		0.22	5
10728	Dibenz(a,h)anthracene	53-70-3	2.9		0.22	5
10728	Diethylphthalate	84-66-2	N.D.		4.5	5
10728	2,4-Dimethylphenol	105-67-9	N.D.		1.1	5
10728	2,4-Dinitrophenol	51-28-5	N.D.		20	5
10728	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		4.5	5
10728	Fluoranthene	206-44-0	22		0.22	5
10728	Fluorene	86-73-7	10		0.22	5
10728	Indeno(1,2,3-cd)pyrene	193-39-5	3.4		0.22	5
10728	2-Methylnaphthalene	91-57-6	58		0.22	5
10728	2-Methylphenol	95-48-7	N.D.		1.1	5
10728	4-Methylphenol	106-44-5	N.D.		1.1	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.		11	5
10728	Phenanthrene	85-01-8	84		0.22	5
10728	Phenol	108-95-2	N.D.		1.1	5
10728	Pyrene	129-00-0	69		0.22	5
10728	Pyridine	110-86-1	N.D.		4.5	5
10728	Quinoline	91-22-5	N.D.		2.2	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	3.83		0.0890	1

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Analysis Report

Sample Description: AOI5-BH-16-056-2-4 Grab Soil
MHIC AOI5

LL Sample # SW 8413807
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/07/2016 12:40 by DD

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH24

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	202	0.560	1
06961	Nickel	7440-02-0	9.51	0.330	1
06971	Vanadium	7440-62-2	10.5	0.253	1
06972	Zinc	7440-66-6	29.6	0.846	1
Wet Chemistry		**SM 2540 G-1997**	**%**	**%**	
00111	Moisture	n.a.	26.0	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	R161681AA	06/16/2016 17:45	Anita M Dale	428.05
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201616041408	06/07/2016 12:40	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	1	201616041408	06/07/2016 12:40	Client Supplied	1
02392	L/H Field Preserved Bisulfate	SW-846 5035A	2	201616041408	06/07/2016 12:40	Client Supplied	1
10728	Skinner 8270 (microwave)	SW-846 8270C	1	16162SLC026	06/14/2016 10:34	Linda M Hartenstine	5
10812	BNA Soil Microwave Skinner	SW-846 3546	1	16162SLC026	06/13/2016 09:15	Michelle A Newswanger	1
06952	Cobalt	SW-846 6010B	1	161605708007	06/09/2016 11:31	Joanne M Gates	1
06955	Lead	SW-846 6010B	1	161605708007	06/09/2016 11:31	Joanne M Gates	1
06961	Nickel	SW-846 6010B	1	161605708007	06/12/2016 09:56	Eric L Eby	1
06971	Vanadium	SW-846 6010B	1	161605708007	06/09/2016 11:31	Joanne M Gates	1
06972	Zinc	SW-846 6010B	1	161605708007	06/09/2016 11:31	Joanne M Gates	1
05708	ICP-ICPMS - SW, 3050B - U3	SW-846 3050B	1	161605708007	06/08/2016 22:16	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-1997	1	16162820002A	06/10/2016 11:54	William C Schwebel	1

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Analysis Report

Sample Description: Trip Blank Water
MHIC AOI5

LL Sample # WW 8413808
LL Group # 1669184
Account # 16657

Project Name: MHIC AOI5

Collected: 06/02/2016

Submitted: 06/07/2016 18:25
Reported: 06/21/2016 13:14

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

5MH25

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	L161621AA	06/10/2016 10:51	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	L161621AA	06/10/2016 10:51	Brett W Kenyon	1

Quality Control Summary

Client Name: Stantec
Reported: 06/21/2016 13:14

Group Number: 1669184

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	MDL
	mg/kg	mg/kg
Batch number: Q161691AA	Sample number(s): 8413793-8413794,8413799	
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: R161671AA	Sample number(s): 8413784-8413786,8413788	
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: R161681AA	Sample number(s): 8413787,8413789-8413791,8413795,8413806-8413807	
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: 06/21/2016 13:14

Group Number: 1669184

Method Blank (continued)

Analysis Name	Result mg/kg	MDL 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
Batch number: X161641AA	Sample number(s): 8413792,8413797-8413798	
Benzene	N.D.	0.0005
sec-Butylbenzene	N.D.	0.001
tert-Butylbenzene	N.D.	0.001
Cyclohexane	N.D.	0.001
1,2-Dibromoethane	N.D.	0.001
1,2-Dichloroethane	N.D.	0.001
Ethylbenzene	N.D.	0.001
n-Hexane	N.D.	0.001
Isopropylbenzene	N.D.	0.001
Methyl Tertiary Butyl Ether	N.D.	0.0005
Naphthalene	N.D.	0.001
Toluene	N.D.	0.001
1,2,4-Trimethylbenzene	N.D.	0.001
1,3,5-Trimethylbenzene	N.D.	0.001
Xylene (Total)	N.D.	0.001
Batch number: X161652AA	Sample number(s): 8413796,8413800-8413801,8413803-8413804	
Benzene	N.D.	0.0005
sec-Butylbenzene	N.D.	0.001
tert-Butylbenzene	N.D.	0.001
Cyclohexane	N.D.	0.001
1,2-Dibromoethane	N.D.	0.001
1,2-Dichloroethane	N.D.	0.001
Ethylbenzene	N.D.	0.001
n-Hexane	N.D.	0.001
Isopropylbenzene	N.D.	0.001
Methyl Tertiary Butyl Ether	N.D.	0.0005
Naphthalene	N.D.	0.001
Toluene	N.D.	0.001
1,2,4-Trimethylbenzene	N.D.	0.001
1,3,5-Trimethylbenzene	N.D.	0.001
Xylene (Total)	N.D.	0.001
Batch number: X161692AA	Sample number(s): 8413802,8413805	
Benzene	N.D.	0.0005
sec-Butylbenzene	N.D.	0.001
tert-Butylbenzene	N.D.	0.001
Cyclohexane	N.D.	0.001
1,2-Dibromoethane	N.D.	0.001
1,2-Dichloroethane	N.D.	0.001
Ethylbenzene	N.D.	0.001
n-Hexane	N.D.	0.001
Isopropylbenzene	N.D.	0.001
Methyl Tertiary Butyl Ether	N.D.	0.0005
Naphthalene	N.D.	0.001
Toluene	N.D.	0.001

*- 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: 06/21/2016 13:14

Group Number: 1669184

Method Blank (continued)

Analysis Name	Result	MDL
	mg/kg	mg/kg
1,2,4-Trimethylbenzene	N.D.	0.001
1,3,5-Trimethylbenzene	N.D.	0.001
Xylene (Total)	N.D.	0.001
	ug/l	ug/l
Batch number: L161621AA	Sample number(s): 8413808	
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: 16160SLG026	Sample number(s): 8413784-8413803	
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
Pyridine	N.D.	0.067
Quinoline	N.D.	0.033

*- 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: 06/21/2016 13:14

Group Number: 1669184

Method Blank (continued)

Analysis Name	Result mg/kg	MDL mg/kg
Batch number: 16162SLC026	Sample number(s): 8413804-8413807	
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
Pyridine	N.D.	0.067
Quinoline	N.D.	0.033
Batch number: 161605708007	Sample number(s): 8413804-8413807	
Cobalt	N.D.	0.0810
Lead	N.D.	0.510
Nickel	N.D.	0.300
Vanadium	N.D.	0.230
Zinc	N.D.	0.770
Batch number: 161635708002	Sample number(s): 8413784-8413803	
Arsenic	N.D.	0.590
Barium	N.D.	0.120
Cadmium	N.D.	0.0490
Chromium	N.D.	0.170
Cobalt	N.D.	0.0810
Lead	0.534 J	0.510
Nickel	N.D.	0.300
Selenium	N.D.	0.900
Silver	N.D.	0.180
Vanadium	N.D.	0.230
Zinc	N.D.	0.770
Batch number: 161675711001	Sample number(s): 8413784-8413789	
Mercury	N.D.	0.100

*- 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: 06/21/2016 13:14

Group Number: 1669184

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: Q161691AA	Sample number(s): 8413793-8413794,8413799								
Benzene	1.00	0.951	1.00	1.04	95	104	80-120	9	30
sec-Butylbenzene	1.00	1.01	1.00	1.05	101	105	64-122	4	30
tert-Butylbenzene	1.00	0.943	1.00	1.00	94	100	68-120	6	30
Cyclohexane	1.00	1.02	1.00	1.07	102	107	58-120	5	30
1,2-Dibromoethane	1.00	0.958	1.00	1.04	96	104	80-120	8	30
1,2-Dichloroethane	1.00	0.947	1.00	1.05	95	105	77-130	10	30
Ethylbenzene	1.00	0.966	1.00	1.04	97	104	80-120	8	30
n-Hexane	1.00	1.11	1.00	1.14	111	114	38-135	3	30
Isopropylbenzene	1.00	0.964	1.00	1.03	96	103	70-120	7	30
Methyl Tertiary Butyl Ether	1.00	0.940	1.00	1.03	94	103	72-120	9	30
Naphthalene	1.00	0.999	1.00	1.05	100	105	53-120	5	30
Toluene	1.00	0.956	1.00	1.03	96	103	80-120	8	30
1,2,4-Trimethylbenzene	1.00	0.981	1.00	1.05	98	105	74-120	7	30
1,3,5-Trimethylbenzene	1.00	0.973	1.00	1.03	97	103	73-120	5	30
Xylene (Total)	3.00	2.87	3.00	3.08	96	103	80-120	7	30
Batch number: R161671AA	Sample number(s): 8413784-8413786,8413788								
Benzene	1.00	0.908	1.00	0.939	91	94	80-120	3	30
sec-Butylbenzene	1.00	0.872	1.00	0.934	87	93	64-122	7	30
tert-Butylbenzene	1.00	0.835	1.00	0.879	84	88	68-120	5	30
Cyclohexane	1.00	0.911	1.00	0.933	91	93	58-120	2	30
1,2-Dibromoethane	1.00	0.934	1.00	0.919	93	92	80-120	2	30
1,2-Dichloroethane	1.00	0.895	1.00	0.918	90	92	77-130	2	30
Ethylbenzene	1.00	0.872	1.00	0.897	87	90	80-120	3	30
n-Hexane	1.00	0.928	1.00	0.942	93	94	38-135	1	30
Isopropylbenzene	1.00	0.863	1.00	0.909	86	91	70-120	5	30
Methyl Tertiary Butyl Ether	1.00	0.915	1.00	0.926	91	93	72-120	1	30
Naphthalene	1.00	0.835	1.00	0.889	84	89	53-120	6	30
Toluene	1.00	0.932	1.00	0.882	93	88	80-120	6	30
1,2,4-Trimethylbenzene	1.00	0.881	1.00	0.912	88	91	74-120	3	30
1,3,5-Trimethylbenzene	1.00	0.907	1.00	0.921	91	92	73-120	2	30
Xylene (Total)	3.00	2.72	3.00	2.74	91	91	80-120	1	30
Batch number: R161681AA	Sample number(s): 8413787,8413789-8413791,8413795,8413806-8413807								
Benzene	1.00	0.900	1.00	0.994	90	99	80-120	10	30
sec-Butylbenzene	1.00	0.853	1.00	0.980	85	98	64-122	14	30
tert-Butylbenzene	1.00	0.791	1.00	0.923	79	92	68-120	15	30
Cyclohexane	1.00	0.831	1.00	0.970	83	97	58-120	15	30
1,2-Dibromoethane	1.00	0.871	1.00	0.984	87	98	80-120	12	30
1,2-Dichloroethane	1.00	0.883	1.00	0.975	88	97	77-130	10	30
Ethylbenzene	1.00	0.854	1.00	0.960	85	96	80-120	12	30
n-Hexane	1.00	0.855	1.00	1.01	86	101	38-135	16	30
Isopropylbenzene	1.00	0.801	1.00	0.925	80	92	70-120	14	30
Methyl Tertiary Butyl Ether	1.00	0.904	1.00	0.992	90	99	72-120	9	30
Naphthalene	1.00	0.898	1.00	0.951	90	95	53-120	6	30
Toluene	1.00	0.873	1.00	1.00	87	100	80-120	14	30
1,2,4-Trimethylbenzene	1.00	0.869	1.00	0.985	87	98	74-120	13	30
1,3,5-Trimethylbenzene	1.00	0.869	1.00	0.985	87	98	73-120	13	30
Xylene (Total)	3.00	2.50	3.00	2.85	83	95	80-120	13	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: 06/21/2016 13:14

Group Number: 1669184

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
Batch number: X161641AA	Sample number(s): 8413792,8413797-8413798								
Benzene	0.0200	0.0182	0.0200	0.0180	91	90	80-120	1	30
sec-Butylbenzene	0.0200	0.0184	0.0200	0.0185	92	93	64-122	1	30
tert-Butylbenzene	0.0200	0.0178	0.0200	0.0182	89	91	68-120	2	30
Cyclohexane	0.0200	0.0170	0.0200	0.0171	85	86	58-120	1	30
1,2-Dibromoethane	0.0200	0.0180	0.0200	0.0179	90	90	80-120	0	30
1,2-Dichloroethane	0.0200	0.0185	0.0200	0.0183	92	91	77-130	1	30
Ethylbenzene	0.0200	0.0189	0.0200	0.0185	94	93	80-120	2	30
n-Hexane	0.0200	0.0173	0.0200	0.0172	86	86	38-135	1	30
Isopropylbenzene	0.0200	0.0190	0.0200	0.0186	95	93	70-120	2	30
Methyl Tertiary Butyl Ether	0.0200	0.0175	0.0200	0.0178	88	89	72-120	1	30
Naphthalene	0.0200	0.0175	0.0200	0.0176	88	88	53-120	0	30
Toluene	0.0200	0.0190	0.0200	0.0185	95	93	80-120	2	30
1,2,4-Trimethylbenzene	0.0200	0.0183	0.0200	0.0185	92	92	74-120	1	30
1,3,5-Trimethylbenzene	0.0200	0.0183	0.0200	0.0183	92	91	73-120	0	30
Xylene (Total)	0.0600	0.0562	0.0600	0.0551	94	92	80-120	2	30
Batch number: X161652AA	Sample number(s): 8413796,8413800-8413801,8413803-8413804								
Benzene	0.0200	0.0178	0.0200	0.0173	89	86	80-120	3	30
sec-Butylbenzene	0.0200	0.0182	0.0200	0.0176	91	88	64-122	3	30
tert-Butylbenzene	0.0200	0.0177	0.0200	0.0172	89	86	68-120	3	30
Cyclohexane	0.0200	0.0149	0.0200	0.0144	74	72	58-120	3	30
1,2-Dibromoethane	0.0200	0.0177	0.0200	0.0175	88	88	80-120	1	30
1,2-Dichloroethane	0.0200	0.0185	0.0200	0.0181	92	91	77-130	2	30
Ethylbenzene	0.0200	0.0185	0.0200	0.0177	93	88	80-120	5	30
n-Hexane	0.0200	0.0141	0.0200	0.0136	70	68	38-135	3	30
Isopropylbenzene	0.0200	0.0185	0.0200	0.0178	93	89	70-120	4	30
Methyl Tertiary Butyl Ether	0.0200	0.0169	0.0200	0.0170	84	85	72-120	1	30
Naphthalene	0.0200	0.0170	0.0200	0.0169	85	85	53-120	1	30
Toluene	0.0200	0.0185	0.0200	0.0179	93	89	80-120	4	30
1,2,4-Trimethylbenzene	0.0200	0.0182	0.0200	0.0176	91	88	74-120	3	30
1,3,5-Trimethylbenzene	0.0200	0.0179	0.0200	0.0174	90	87	73-120	3	30
Xylene (Total)	0.0600	0.0554	0.0600	0.0536	92	89	80-120	3	30
Batch number: X161692AA	Sample number(s): 8413802,8413805								
Benzene	0.0200	0.0179	0.0200	0.0175	89	88	80-120	2	30
sec-Butylbenzene	0.0200	0.0176	0.0200	0.0176	88	88	64-122	0	30
tert-Butylbenzene	0.0200	0.0176	0.0200	0.0177	88	89	68-120	0	30
Cyclohexane	0.0200	0.0133	0.0200	0.0134	66	67	58-120	1	30
1,2-Dibromoethane	0.0200	0.0189	0.0200	0.0179	94	89	80-120	5	30
1,2-Dichloroethane	0.0200	0.0189	0.0200	0.0185	95	92	77-130	3	30
Ethylbenzene	0.0200	0.0181	0.0200	0.0179	91	89	80-120	1	30
n-Hexane	0.0200	0.0122	0.0200	0.0122	61	61	38-135	0	30
Isopropylbenzene	0.0200	0.0186	0.0200	0.0182	93	91	70-120	2	30
Methyl Tertiary Butyl Ether	0.0200	0.0183	0.0200	0.0179	92	90	72-120	2	30
Naphthalene	0.0200	0.0186	0.0200	0.0177	93	88	53-120	5	30
Toluene	0.0200	0.0182	0.0200	0.0181	91	90	80-120	1	30
1,2,4-Trimethylbenzene	0.0200	0.0176	0.0200	0.0177	88	88	74-120	0	30
1,3,5-Trimethylbenzene	0.0200	0.0175	0.0200	0.0177	87	88	73-120	1	30
Xylene (Total)	0.0600	0.0554	0.0600	0.0548	92	91	80-120	1	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: 06/21/2016 13:14

Group Number: 1669184

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
	ug/l	ug/l	ug/l	ug/l					
Batch number: L161621AA	Sample number(s): 8413808								
Benzene	20	21.72	20	20.64	109	103	78-120	5	30
sec-Butylbenzene	20	21.69	20	20.38	108	102	68-124	6	30
tert-Butylbenzene	20	21.12	20	20.07	106	100	74-121	5	30
Cyclohexane	20	21.61	20	20.59	108	103	65-123	5	30
1,2-Dibromoethane	20	20.71	20	20.13	104	101	80-120	3	30
1,2-Dichloroethane	20	20.52	20	19.92	103	100	72-127	3	30
Ethylbenzene	20	21.4	20	20.15	107	101	78-120	6	30
n-Hexane	20	22.11	20	20.94	111	105	57-131	5	30
Isopropylbenzene	20	21.37	20	20.2	107	101	80-120	6	30
Methyl Tertiary Butyl Ether	20	20.85	20	20.21	104	101	75-120	3	30
Naphthalene	20	18.61	20	18.09	93	90	59-120	3	30
Toluene	20	21.59	20	20.16	108	101	80-120	7	30
1,2,4-Trimethylbenzene	20	20.66	20	19.52	103	98	75-120	6	30
1,3,5-Trimethylbenzene	20	20.94	20	19.68	105	98	75-120	6	30
Xylene (Total)	60	63.7	60	60.15	106	100	80-120	6	30
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 16160SLG026	Sample number(s): 8413784-8413803								
Acenaphthene	1.67	1.68			101		83-116		
Anthracene	1.67	1.75			105		82-118		
Benzo(a)anthracene	1.67	1.81			109		76-119		
Benzo(a)pyrene	1.67	1.83			110		85-117		
Benzo(b)fluoranthene	1.67	1.96			118		78-129		
Benzo(g,h,i)perylene	1.67	1.67			100		77-118		
Benzo(k)fluoranthene	1.67	1.70			102		79-120		
1,1'-Biphenyl	1.67	1.64			98		76-111		
Di-n-butylphthalate	1.67	1.83			110		84-120		
Chrysene	1.67	1.78			107		80-121		
Dibenz(a,h)anthracene	1.67	1.75			105		81-123		
Diethylphthalate	1.67	1.73			104		81-118		
2,4-Dimethylphenol	1.67	1.58			95		83-120		
2,4-Dinitrophenol	3.33	3.64			109		16-132		
bis(2-Ethylhexyl)phthalate	1.67	1.87			112		81-121		
Fluoranthene	1.67	1.76			105		81-117		
Fluorene	1.67	1.70			102		86-118		
Indeno(1,2,3-cd)pyrene	1.67	1.71			103		81-118		
2-Methylnaphthalene	1.67	1.68			101		83-109		
2-Methylphenol	1.67	1.81			109		80-133		
4-Methylphenol	1.67	1.79			107		73-125		
4-Nitrophenol	1.67	1.52			91		52-133		
Phenanthrene	1.67	1.66			99		80-114		
Phenol	1.67	1.75			105		73-122		
Pyrene	1.67	1.63			98		81-114		
Pyridine	1.67	1.63			98		55-109		
Quinoline	1.67	1.74			105		80-119		
Batch number: 16162SLC026	Sample number(s): 8413804-8413807								

*- 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: 06/21/2016 13:14

Group Number: 1669184

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
Acenaphthene	1.67	1.65			99		83-116		
Anthracene	1.67	1.69			101		82-118		
Benzo(a)anthracene	1.67	1.78			107		76-119		
Benzo(a)pyrene	1.67	1.74			105		85-117		
Benzo(b)fluoranthene	1.67	1.85			111		78-129		
Benzo(g,h,i)perylene	1.67	1.66			100		77-118		
Benzo(k)fluoranthene	1.67	1.64			98		79-120		
1,1'-Biphenyl	1.67	1.55			93		76-111		
Di-n-butylphthalate	1.67	1.78			107		84-120		
Chrysene	1.67	1.76			105		80-121		
Dibenz(a,h)anthracene	1.67	1.76			105		81-123		
Diethylphthalate	1.67	1.72			103		81-118		
2,4-Dimethylphenol	1.67	1.50			90		83-120		
2,4-Dinitrophenol	3.33	3.39			102		16-132		
bis(2-Ethylhexyl)phthalate	1.67	1.84			111		81-121		
Fluoranthene	1.67	1.74			104		81-117		
Fluorene	1.67	1.68			101		86-118		
Indeno(1,2,3-cd)pyrene	1.67	1.67			100		81-118		
2-Methylnaphthalene	1.67	1.64			98		83-109		
2-Methylphenol	1.67	1.78			107		80-133		
4-Methylphenol	1.67	1.75			105		73-125		
4-Nitrophenol	1.67	1.54			92		52-133		
Phenanthrene	1.67	1.60			96		80-114		
Phenol	1.67	1.71			102		73-122		
Pyrene	1.67	1.56			94		81-114		
Pyridine	1.67	1.32			79		55-109		
Quinoline	1.67	1.71			103		80-119		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 161605708007	Sample number(s): 8413804-8413807								
Cobalt	50	49.93			100		80-120		
Lead	15	14.79			99		80-120		
Nickel	50	51.43			103		80-120		
Vanadium	50	51.36			103		80-120		
Zinc	50	49.15			98		80-120		
Batch number: 161635708002	Sample number(s): 8413784-8413803								
Arsenic	15	14.58			97		80-120		
Barium	200	209.42			105		80-120		
Cadmium	5.00	5.17			103		80-120		
Chromium	20	20.99			105		80-120		
Cobalt	50	52.5			105		80-120		
Lead	15	16.25			108		80-120		
Nickel	50	53.25			107		80-120		
Selenium	15	15.37			102		80-120		
Silver	5.00	5.34			107		80-120		
Vanadium	50	52.86			106		80-120		
Zinc	50	50.57			101		80-120		
Batch number: 161675711001	Sample number(s): 8413784-8413789								
Mercury	0.100	0.103			103		80-120		

*- 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: 06/21/2016 13:14

Group Number: 1669184

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
	%	%	%	%					
Batch number: 16162820001A	Sample number(s): 8413784-8413793								
Moisture	89.5	89.43			100		99-101		
Batch number: 16162820001B	Sample number(s): 8413794-8413803								
Moisture	89.5	89.43			100		99-101		
Batch number: 16162820002A	Sample number(s): 8413804-8413807								
Moisture	89.5	89.42			100		99-101		

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: 16160SLG026	Sample number(s): 8413784-8413803 UNSPK: 8413788									
Acenaphthene	N.D.	1.64	1.54	1.64	1.62	94	99	83-116	6	30
Anthracene	N.D.	1.64	1.60	1.64	1.69	97	103	82-118	6	30
Benzo(a)anthracene	N.D.	1.64	1.63	1.64	1.73	99	106	76-119	6	30
Benzo(a)pyrene	N.D.	1.64	1.64	1.64	1.75	100	107	85-117	7	30
Benzo(b)fluoranthene	0.00409	1.64	1.72	1.64	1.73	104	105	78-129	1	30
Benzo(g,h,i)perylene	0.00651	1.64	1.51	1.64	1.54	91	94	77-118	2	30
Benzo(k)fluoranthene	N.D.	1.64	1.53	1.64	1.76	93	107	79-120	14	30
1,1'-Biphenyl	N.D.	1.64	1.45	1.64	1.53	89	93	76-111	5	30
Di-n-butylphthalate	N.D.	1.64	1.63	1.64	1.77	99	108	84-120	8	30
Chrysene	N.D.	1.64	1.60	1.64	1.74	98	106	80-121	8	30
Dibenz(a,h)anthracene	N.D.	1.64	1.59	1.64	1.65	97	101	81-123	4	30
Diethylphthalate	N.D.	1.64	1.55	1.64	1.66	94	101	81-118	7	30
2,4-Dimethylphenol	N.D.	1.64	1.48	1.64	1.55	90	94	83-120	4	30
2,4-Dinitrophenol	N.D.	3.28	2.88	3.28	3.02	88	92	16-132	5	30
bis(2-Ethylhexyl)phthalate	N.D.	1.64	1.68	1.64	1.87	102	114	81-121	11	30
Fluoranthene	0.00948	1.64	1.59	1.64	1.73	96	105	81-117	8	30
Fluorene	N.D.	1.64	1.58	1.64	1.66	96	102	86-118	5	30
Indeno(1,2,3-cd)pyrene	0.00336	1.64	1.53	1.64	1.59	93	97	81-118	4	30
2-Methylnaphthalene	0.208	1.64	2.00	1.64	2.66	109	150*	83-109	28	30
2-Methylphenol	N.D.	1.64	1.65	1.64	1.62	100	99	80-133	2	30
4-Methylphenol	N.D.	1.64	1.56	1.64	1.56	95	95	73-125	0	30
4-Nitrophenol	N.D.	1.64	1.39	1.64	1.56	84	95	52-133	12	30
Phenanthrene	0.00688	1.64	1.54	1.64	1.62	93	98	80-114	5	30
Phenol	N.D.	1.64	1.61	1.64	1.61	98	98	73-122	0	30
Pyrene	0.0146	1.64	1.51	1.64	1.62	91	98	81-114	7	30
Pyridine	N.D.	1.64	1.22	1.64	1.33	74	81	55-109	9	30
Quinoline	N.D.	1.64	1.62	1.64	1.79	99	109	80-119	10	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: 06/21/2016 13:14

Group Number: 1669184

MS/MSD (continued)

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: 16162SLC026	Sample number(s): 8413804-8413807 UNSPK: P414970									
Acenaphthene	0.00464	1.65	1.62	1.64	1.60	98	97	83-116	1	30
Anthracene	0.00512	1.65	1.67	1.64	1.65	101	100	82-118	2	30
Benzo(a)anthracene	0.0246	1.65	1.81	1.64	1.72	108	103	76-119	5	30
Benzo(a)pyrene	0.0149	1.65	1.73	1.64	1.73	104	104	85-117	0	30
Benzo(b)fluoranthene	0.0123	1.65	1.63	1.64	1.68	98	101	78-129	3	30
Benzo(g,h,i)perylene	0.0292	1.65	1.84	1.64	1.84	110	110	77-118	0	30
Benzo(k)fluoranthene	0.00338	1.65	1.68	1.64	1.61	102	98	79-120	4	30
1,1'-Biphenyl	N.D.	1.65	1.59	1.64	1.57	96	96	76-111	1	30
Di-n-butylphthalate	N.D.	1.65	1.80	1.64	1.80	109	110	84-120	0	30
Chrysene	0.0561	1.65	1.72	1.64	1.71	101	101	80-121	1	30
Dibenz(a,h)anthracene	0.00624	1.65	1.85	1.64	1.86	112	113	81-123	0	30
Diethylphthalate	N.D.	1.65	1.62	1.64	1.64	98	100	81-118	1	30
2,4-Dimethylphenol	N.D.	1.65	1.46	1.64	1.41	89	86	83-120	3	30
2,4-Dinitrophenol	N.D.	3.29	N.D.	3.29	N.D.	0*	0*	16-132	0	30
bis(2-Ethylhexyl)phthalate	0.240	1.65	2.16	1.64	2.21	117	120	81-121	2	30
Fluoranthene	0.0225	1.65	1.60	1.64	1.57	96	94	81-117	2	30
Fluorene	0.0130	1.65	1.58	1.64	1.58	95	95	86-118	0	30
Indeno(1,2,3-cd)pyrene	0.00717	1.65	1.78	1.64	1.79	108	108	81-118	0	30
2-Methylnaphthalene	0.0320	1.65	1.58	1.64	1.60	94	95	83-109	1	30
2-Methylphenol	N.D.	1.65	1.61	1.64	1.64	98	100	80-133	2	30
4-Methylphenol	N.D.	1.65	1.58	1.64	1.59	96	97	73-125	1	30
4-Nitrophenol	N.D.	1.65	1.10	1.64	1.04	67	64	52-133	5	30
Phenanthrene	0.248	1.65	1.83	1.64	1.82	96	96	80-114	1	30
Phenol	N.D.	1.65	1.61	1.64	1.63	98	99	73-122	1	30
Pyrene	0.0872	1.65	1.62	1.64	1.63	93	94	81-114	1	30
Pyridine	N.D.	1.65	1.10	1.64	1.13	67	69	55-109	3	30
Quinoline	N.D.	1.65	1.15	1.64	1.18	70*	72*	80-119	2	30
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 161605708007	Sample number(s): 8413804-8413807 UNSPK: 8413804									
Cobalt	5.48	49.02	51.73	48.08	50.36	94	93	75-125	3	20
Lead	36.36	14.71	36.27	14.42	37.18	-1*	6*	75-125	2	20
Nickel	8.78	49.02	57.57	48.08	56.4	100	99	75-125	2	20
Vanadium	32.55	49.02	85.06	48.08	82.76	107	104	75-125	3	20
Zinc	38.31	49.02	86.6	48.08	85.05	99	97	75-125	2	20
Batch number: 161635708002	Sample number(s): 8413784-8413803 UNSPK: 8413784									
Arsenic	16.31	12.71	36.51	14.29	25.97	159*	68*	75-125	34*	20
Barium	99.41	169.49	262.65	190.48	271.13	96	90	75-125	3	20
Cadmium	N.D.	4.24	4.00	4.76	4.70	94	99	75-125	16	20
Chromium	29.94	16.95	47.27	19.05	41.41	102	60*	75-125	13	20
Cobalt	8.45	42.37	47.63	47.62	53.39	92	94	75-125	11	20
Lead	36.45	12.71	47.9	14.29	48.18	90	82	75-125	1	20
Nickel	16.16	42.37	56.54	47.62	59.32	95	91	75-125	5	20
Selenium	1.92	12.71	13.33	14.29	14.92	90	91	75-125	11	20
Silver	1.48	4.24	5.37	4.76	5.40	92	82	75-125	1	20
Vanadium	34.97	42.37	79.23	47.62	78.94	104	92	75-125	0	20
Zinc	87.46	42.37	114.82	47.62	118.61	65*	65*	75-125	3	20

*- Outside of specification
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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: 06/21/2016 13:14

Group Number: 1669184

MS/MSD (continued)

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: 161675711001	Sample number(s): 8413784-8413789 UNSPK: P424733									
Mercury	0.0127	0.156	0.168	0.165	0.177	100	100	80-120	5	20

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: R161671AA	Sample number(s): 8413784-8413786,8413788 BKG: P421505			
sec-Butylbenzene	N.D.	N.D.	0 (1)	30
1,2-Dichloroethane	N.D.	N.D.	0 (1)	30
Ethylbenzene	N.D.	N.D.	0 (1)	30
Isopropylbenzene	N.D.	N.D.	0 (1)	30
Naphthalene	N.D.	N.D.	0 (1)	30
Toluene	N.D.	N.D.	0 (1)	30
1,2,4-Trimethylbenzene	N.D.	N.D.	0 (1)	30
1,3,5-Trimethylbenzene	N.D.	N.D.	0 (1)	30
Xylene (Total)	N.D.	N.D.	0 (1)	30
	mg/kg	mg/kg		
Batch number: 161605708007	Sample number(s): 8413804-8413807 BKG: 8413804			
Cobalt	5.48	5.94	8	20
Lead	36.36	25.77	34*	20
Nickel	8.78	9.75	10	20
Vanadium	32.55	32.82	1	20
Zinc	38.31	40.93	7	20
Batch number: 161635708002	Sample number(s): 8413784-8413803 BKG: 8413784			
Arsenic	16.31	23.24	35*	20
Barium	99.41	95.5	4	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	29.94	24.82	19	20
Cobalt	8.45	8.12	4	20
Lead	36.45	63.89	55*	20
Nickel	16.16	12.57	25*	20
Selenium	1.92	1.91	1 (1)	20
Silver	1.48	1.01	38* (1)	20
Vanadium	34.97	32.58	7	20
Zinc	87.46	73.4	17	20
Batch number: 161675711001	Sample number(s): 8413784-8413789 BKG: P424733			
Mercury	0.0127	0.0119	6 (1)	20
	%	%		

*- Outside of specification
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(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: 06/21/2016 13:14

Group Number: 1669184

Laboratory Duplicate (continued)

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

Analysis Name	BKG Conc %	DUP Conc %	DUP RPD	DUP RPD Max
Batch number: 16162820001A	Sample number(s): 8413784-8413793 BKG: 8413792			
Moisture	18.85	18.65	1	5
Batch number: 16162820001B	Sample number(s): 8413794-8413803 BKG: 8413801			
Moisture	14.48	15.35	6*	5
Batch number: 16162820002A	Sample number(s): 8413804-8413807 BKG: P416911			
Moisture	83.13	83.11	0	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: L161621AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8413808	100	102	101	98
Blank	102	103	99	99
LCS	101	101	100	100
LCSD	100	101	100	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: Evergreen Comprehensive VOCs
Batch number: Q161691AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8413793	61	64	90	105
8413794	70	71	76	92
8413799	64	66	78	90
Blank	99	100	98	97
LCS	95	94	93	92
LCSD	102	102	99	98
Limits:	50-141	54-135	52-141	50-131

Analysis Name: Evergreen Comprehensive VOCs
Batch number: R161671AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8413784	59	61	58	122
8413785	60	63	56	66
8413786	59	61	57	65
8413788	73	78	72	84
Blank	90	92	88	82
DUP	74	74	71	74
LCS	87	91	88	81
LCSD	91	91	82	84

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Quality Control Summary

Client Name: Stantec
Reported: 06/21/2016 13:14

Group Number: 1669184

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.

Analysis Name: Evergreen Comprehensive VOCs
Batch number: R161681AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8413787	57	57	53	58
8413789	59	60	59	66
8413790	60	62	64	113
8413791	56	56	76	90
8413795	79	78	75	78
8413806	56	57	64	51
8413807	59	58	52	56
Blank	86	90	89	82
LCS	85	88	82	79
LCSD	92	93	93	89
Limits:	50-141	54-135	52-141	50-131

Analysis Name: Evergreen Comprehensive VOCs
Batch number: X161641AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8413792	100	102	99	98
8413797	100	100	100	96
8413798	98	104	100	94
Blank	102	105	98	92
LCS	100	100	102	98
LCSD	98	100	101	97
Limits:	50-141	54-135	52-141	50-131

Analysis Name: Evergreen Comprehensive VOCs
Batch number: X161652AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8413796	103	107	97	96
8413800	103	103	100	90
8413801	99	102	104	97
8413803	100	104	106	100
8413804	102	105	99	93
Blank	102	101	99	91
LCS	99	98	101	97
LCSD	100	98	101	97
Limits:	50-141	54-135	52-141	50-131

Analysis Name: Evergreen Comprehensive VOCs
Batch number: X161692AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8413802	101	106	99	99
8413805	105	107	96	92

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Quality Control Summary

Client Name: Stantec
Reported: 06/21/2016 13:14

Group Number: 1669184

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	104	101	96	93
LCS	102	102	98	98
LCSD	102	99	99	97
Limits:	50-141	54-135	52-141	50-131

Analysis Name: Skinner 8270 (microwave)
Batch number: 16160SLG026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
8413784	66	71	89	99	76	97
8413785	89	93	91	97	86	94
8413786	96	99	95	101	91	101
8413787	92	95	92	98	88	95
8413788	103	103	97	103	94	98
8413789	92	96	86	91	84	91
8413790	89	94	73	97	74	88
8413791	89	95	81	109	84	88
8413792	91	91	79	92	96	91
8413793	97	100	86	108	105	102
8413794	95	93	76	94	95	93
8413795	91	94	77	97	96	92
8413796	95	97	82	95	97	95
8413797	93	96	81	96	103	98
8413798	90	92	76	91	94	90
8413799	95	97	79	97	97	97
8413800	95	96	76	95	98	95
8413801	102	102	84	102	104	101
8413802	89	91	74	90	95	90
8413803	93	95	79	96	97	96
Blank	99	99	97	96	95	95
LCS	104	105	96	101	97	99
MS	97	98	88	98	87	92
MSD	98	100	94	115	90	96
Limits:	58-122	57-126	35-136	54-123	63-117	59-129

Analysis Name: Skinner 8270 (microwave)
Batch number: 16162SLC026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
8413804	87	87	84	86	83	89
8413805	92	93	90	92	88	92
8413806	82	80	71	107	91	91
8413807	76	76	66	80	89	88
Blank	95	96	96	95	90	96
LCS	99	99	92	95	90	93
MS	91	91	74	93	95	95
MSD	94	95	74	94	95	98
Limits:	58-122	57-126	35-136	54-123	63-117	59-129

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(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: 06/21/2016 13:14

Group Number: 1669184

*- 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 Environmental

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Acct. # 166657 Group # 1669184 Sample # 8413784-808

COC # 501896

Client Information

Client: Stantec

Acct. #: Evergreen

Project Name/#: Marcus Hook AOI5

PWSID #:

Project Manager: Jennifer Menges

P.O. #:

Sampler: Dan Downing

Quote #:

State where samples were collected: PA

For Compliance: Yes ☐ No ☐

For Lab Use Only

FSC:

SCR#: 189612

Matrix

Tissue ☐ Ground ☐ Surface ☐ Sediment ☐ Potable ☐ Soil ☒ Water NPDES ☐ Other: ____

Analysis Requested / Preservation Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	VOCs by 8260 (H)	SVOCs by 8270 (*)	Metals by 6010/6020 (*) Cobalt, Lead, Nickel, Vanadium, Zinc	EDB by 8260 (H)
AOI5-BH-16-067-0-2	6/6/16	0910	X		5	X	X	X	X
AOI5-BH-16-067-8-10	6/6/16	0935	X		5	X	X	X	X
AOI5-BH-16-068-0-2	6/6/16	1000	X		5	X	X	X	X
AOI5-BH-16-066-6-8	6/6/16	1015	X		5	X	X	X	X
AOI5-BH-16-066-0-2	6/6/16	1040	X		5	X	X	X	X
AOI5-BH-16-066-6-8	6/6/16	1100	X		5	X	X	X	X
AOI5-BH-16-062-0-2	6/6/16	1130	X		5	X	X	X	X
AOI5-BH-16-062-7-8	6/6/16	1200	X		5	X	X	X	X
AOI5-BH-16-064-0-2	6/6/16	1230	X		5	X	X	X	X
AOI5-BH-16-064-8-10	6/6/16	1300	X		5	X	X	X	X

Preservation Codes

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

Remarks

* for specific VOC and SVOC analyses, see attached Evergreen Comprehensive List (April 2016)

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: ____

E-mail address: Jennifer.Menges@stantec.com

Relinquished by	Date	Time	Received by	Date	Time
Bottle Storage					
[signature]	6/7/16	1350	[signature]		
[signature]	6/7/16	1925	[signature]		
			[signature]	6/7/16	1820

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

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

NYSDEC Category A or B MA MCP CT RCP

EDD Required? Yes No

If yes, format: EQUIS EFW Stantec

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 0.8-2.9 °C

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

7044 0216

DP not needed per AVANI P. 6/9/16 - AC

Environmental Analysis Request/Chain of Custody

eurofins

Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 16657 Group # 1669184 Sample # 8413784-808

COC # 501897

Client Information

Client: Stantec

Acct. #: Evergreen

Project Name/#: Marcus Hook AOI5

PWSID #:

Project Manager: Jennifer Menges

P.O. #:

Sampler: Dan Downing

Quote #:

State where samples were collected: PA

For Compliance: Yes ☐ No ☐

Matrix

Tissue ☐ Ground ☐ Surface ☐ Sediment ☐ Potable ☐ NPDES ☐ Soil ☒ Water ☐ Other: ____

Analysis Requested / Preservation Codes

For Lab Use Only

FSC: ____

SCR#: ____

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Total # of Containers	VOCs by 8260*	SVOCs by 8270*	Metals by 6010/6020	Cobalt, Lead, Nickel, Vanadium, Zinc	EDB by 8260
						#					H
AOI5-BH-16-063-0-2	6/6/16	1330	X		X	5	X	X	X	X	X
AOI5-BH-16-063-6-8	6/6/16	1340	X		X	5	X	X	X	X	X
AOI5-BH-16-061-0-2	6/7/16	0745	X		X	5	X	X	X	X	X
AOI5-BH-16-061-10-11	6/7/16	0805	X		X	5	X	X	X	X	X
AOI5-BH-16-060-0-2	6/7/16	0830	X		X	5	X	X	X	X	X
AOI5-BH-16-060-8-10	6/7/16	0850	X		X	5	X	X	X	X	X
AOI5-BH-16-059-0-2	6/7/16	0935	X		X	5	X	X	X	X	X
AOI5-BH-16-059-8-10	6/7/16	0955	X		X	5	X	X	X	X	X
AOI5-BH-16-058-0-2	6/7/16	1020	X		X	5	X	X	X	X	X
AOI5-BH-16-058-3-4	6/7/16	1040	X		X	5	X	X	X	X	X

Preservation Codes

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

Remarks

*For specific VOC and SVOC analyses, see attached Evergreen Comprehensive List (6/21/2016)

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: ____

E-mail address: Jennifer.Menges@stantec.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

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

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	6/8/16	1350	[signature]	6/7/16	[illegible]
[signature]	6/7/16	1825			
			[signature]	6/7/16	1820

EDD Required? Yes No

If yes, format: EQUIS EFW Stantec

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 0.8-2.9 °C

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7044 0216

DP not needed per AVAni P. 6/9/16 - A.

Environmental Analysis Request/Chain of Custody

eurofins

Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 166657 Group # 1669184 Sample # 8413784-808

COC # 501898

Client Information

Client: Stantec

Acct. #: Evergreen

Project Name/#: Marcus Hook AOI 5

PWSID #:

Project Manager: Jennifer Menges

P.O. #:

Sampler: Dan Downing

Quote #:

State where samples were collected: PA

For Compliance: Yes ☐ No ☐

For Lab Use Only

FSC:

SCR#:

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil/Sediment (Tissue)	Water (Ground, Potable, Surface, NPDES)	Other: Trip Blank water	Total # of Containers	VOCs by 8260 *	SVOCs by 8270 *	Metals by 6010/6020	Cobalt, Lead, Nickel, Vanadium, Zinc	EDB by 8260						Remarks
													H						
AOI5-BH-16-057-0-2	6/7/16	1100	X		X			5	X	X	X	X	X						
AOI5-BH-16-057-2-8	6/7/16	1125	X		X			5	X	X	X	X	X						
AOI5-BH-16-058-0-2	6/7/16	1215	X		X			5	X	X	X	X	X						
AOI5-BH-16-058-2-4	6/7/16	1240	X		X			5	X	X	X	X	X						
Trip Blank	6/7/16	—	X				X	5	X										

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

Remarks: *For specific VOC and SVOC analyses, see attached Evergreen Comprehensive List (April 2016)

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed:

E-mail address: Jennifer.Menges@stantec.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

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

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Dan Downing	6/7/16	1350	[illegible]	6/7/16	[illegible]
[illegible]	6/7/16	1835			
			[illegible]	6/7/16	1820

EDD Required? Yes No

If yes, format: EQuIS-EFW-Stantec

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 0.8-2.9°C

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

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

7044 0216

DP not needed per Avani P. 6/9/16 AC

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Sample Administration Receipt Documentation Log

Doc Log ID: 149363

Group Number(s): 1669184

Client: Stantec

Marcus Hook AOI5

Delivery and Receipt Information

Delivery Method:	ELLE Courier	Arrival Timestamp:	06/07/2016 18:25
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:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	5
Samples Intact:	Yes	Trip Blank Type:	HCL
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Christine Knoedler (1259) at 22:52 on 06/07/2016

Samples Chilled Details: Marcus Hook AOI5

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	DT131	2.9	DT	Wet	Y	Loose	N
2	DT131	0.8	DT	Wet	Y	Loose	N
3	DT131	1.3	DT	Wet	Y	Loose	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.

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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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