ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

Report Date: July 26, 2016

Project: Marcus Hook Facility AOI7

Submittal Date: 06/30/2016
Group Number: 1678000
SDG: MHF44
PO Number: 11102641
State of Sample Origin: PA

Client Sample Description	Lancaster Labs (LL) #
GW-11102641-MW530L-062816-AH-010 Grab Groundwater	8455691
GW-11102641-MW533U-062916-RM-011 Grab Groundwater	8455692
GW-11102641-MW533L-062916-RM-012 Grab Groundwater	8455693
GW-11102641-MW551-062916-MM-013 Grab Groundwater	8455694
GW-11102641-MW552-062916-AH-014 Grab Groundwater	8455695
GW-11102641-MW540-062916-RM-015 Grab Groundwater	8455696
GW-11102641-MW539-062916-AH-016 Grab Groundwater	8455697
GW-11102641-MW184-062916-MM-018 Grab Groundwater	8455698
GW-11102641-MW182-062916-MM-017 Grab Groundwater	8455699
GW-11102641-MW187-062916-RM-019 Grab Groundwater	8455700
GW-11102641-MW277-062916-RM-020 Grab Groundwater	8455701
GW-11102641-MW132-062916-MM-021 Grab Groundwater	8455702
TB-11102641-062916-001 Water	8455703

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	GHD, Inc.	Attn: Dave Steele
Electronic Copy To	GHD	Attn: Paul McMahon

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

(717) 556-7261

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW530L-062816-AH-010 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455691
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/28/2016 18:00 by AH

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4401 SDG#: MHF44-01

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	**ug/l**	
10335	Acrolein	107-02-8	N.D.		100	40	1
10335	Acrylonitrile	107-13-1	N.D.		20	4	1
10335	Benzene	71-43-2	N.D.		1	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.		1	0.5	1
10335	Bromoform	75-25-2	N.D.		4	0.5	1
10335	Bromomethane	74-83-9	N.D.		1	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.		1	0.5	1
10335	Chlorobenzene	108-90-7	3		1	0.5	1
10335	Chloroethane	75-00-3	N.D.		1	0.5	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.		10	2	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.						
10335	Chloroform	67-66-3	N.D.		1	0.5	1
10335	Chloromethane	74-87-3	N.D.		1	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.		1	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.		1	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.		1	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.		1	0.5	1
10335	1,2-Dichloroethene (Total)	540-59-0	N.D.		1	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.		1	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		1	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		1	0.5	1
10335	Ethylbenzene	100-41-4	N.D.		1	0.5	1
10335	Methylene Chloride	75-09-2	N.D.		4	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.		1	0.5	1
10335	Toluene	108-88-3	N.D.		1	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.		1	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.		1	0.5	1
10335	Trichloroethene	79-01-6	N.D.		1	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.		1	0.5	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	
04678	Acenaphthene	83-32-9	0.5	J	0.5	0.1	1
04678	Acenaphthylene	208-96-8	N.D.		0.5	0.1	1
04678	Anthracene	120-12-7	0.1	J	0.5	0.1	1
04678	Benzidine	92-87-5	N.D.		60	20	1
04678	Benzo(a)anthracene	56-55-3	N.D.		0.5	0.1	1
04678	Benzo(a)pyrene	50-32-8	N.D.		0.5	0.1	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.		0.5	0.1	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.		0.5	0.1	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.		0.5	0.1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.		1	0.5	1
04678	Butylbenzylphthalate	85-68-7	N.D.		5	2	1
04678	Di-n-butylphthalate	84-74-2	N.D.		5	2	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.		1	0.5	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.		1	0.5	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.		1	0.5	1
04678	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.		1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW530L-062816-AH-010 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455691
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/28/2016 18:00 by AH

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4401 SDG#: MHF44-01

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
04678	2-Chloronaphthalene	91-58-7	N.D.		1	0.4	1
04678	2-Chlorophenol	95-57-8	N.D.		1	0.5	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.		1	0.5	1
04678	Chrysene	218-01-9	N.D.		0.5	0.1	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.		0.5	0.1	1
04678	1,2-Dichlorobenzene	95-50-1	N.D.		1	0.5	1
04678	1,3-Dichlorobenzene	541-73-1	N.D.		1	0.5	1
04678	1,4-Dichlorobenzene	106-46-7	N.D.		1	0.5	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.		5	2	1
04678	2,4-Dichlorophenol	120-83-2	N.D.		1	0.5	1
04678	Diethylphthalate	84-66-2	N.D.		5	2	1
04678	2,4-Dimethylphenol	105-67-9	N.D.		1	0.5	1
04678	Dimethylphthalate	131-11-3	N.D.		5	2	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.		15	5	1
04678	2,4-Dinitrophenol	51-28-5	N.D.		30	10	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.		5	1	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.		1	0.5	1
04678	1,2-Diphenylhydrazine	122-66-7	N.D.		1	0.5	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		5	2	1
04678	Fluoranthene	206-44-0	0.2	J	0.5	0.1	1
04678	Fluorene	86-73-7	0.2	J	0.5	0.1	1
04678	Hexachlorobenzene	118-74-1	N.D.		0.5	0.1	1
04678	Hexachlorobutadiene	87-68-3	N.D.		1	0.5	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.		15	5	1
04678	Hexachloroethane	67-72-1	N.D.		5	1	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.5	0.1	1
04678	Isophorone	78-59-1	N.D.		1	0.5	1
04678	Naphthalene	91-20-3	0.5	J	0.5	0.1	1
04678	Nitrobenzene	98-95-3	N.D.		1	0.5	1
04678	2-Nitrophenol	88-75-5	N.D.		1	0.5	1
04678	4-Nitrophenol	100-02-7	N.D.		30	10	1
04678	N-Nitrosodimethylamine	62-75-9	N.D.		5	2	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.		1	0.5	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.		1	0.5	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04678	Di-n-octylphthalate	117-84-0	N.D.		5	2	1
04678	Pentachlorophenol	87-86-5	N.D.		5	1	1
04678	Phenanthrene	85-01-8	0.2	J	0.5	0.1	1
04678	Phenol	108-95-2	N.D.		1	0.5	1
04678	Pyrene	129-00-0	0.2	J	0.5	0.1	1
04678	1,2,4-Trichlorobenzene	120-82-1	N.D.		1	0.5	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.		1	0.5	1
Pesticides/PCBs	**SW-846 8081A**		**ug/l**		**ug/l**	**ug/l**	
00177	Aldrin	309-00-2	N.D.		0.0080	0.0016	1

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW530L-062816-AH-010 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455691
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/28/2016 18:00 by AH

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4401 SDG#: MHF44-01

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081A**		**ug/l**	**ug/l**	**ug/l**	
00177	Alpha BHC	319-84-6	0.0044 J	0.0080	0.0024	1
00177	Beta BHC	319-85-7	0.0052 J	0.0080	0.0027	1
00177	Gamma BHC - Lindane	58-89-9	N.D.	0.0080	0.0016	1
00177	Chlordane	57-74-9	N.D.	0.40	0.13	1
00177	p,p-DDD	72-54-8	0.11	0.016	0.0040	1
00177	p,p-DDE	72-55-9	N.D. V	0.020	0.020	1
00177	p,p-DDT	50-29-3	N.D.	0.016	0.0042	1
00177	Delta BHC	319-86-8	0.0067 J	0.0080	0.0027	1
00177	Dieldrin	60-57-1	0.026 P	0.016	0.0042	1
00177	Endosulfan I	959-98-8	N.D. V	0.0080	0.0047	1
00177	Endosulfan II	33213-65-9	N.D.	0.024	0.012	1
00177	Endosulfan Sulfate	1031-07-8	N.D.	0.016	0.0046	1
00177	Endrin	72-20-8	N.D.	0.016	0.0065	1
00177	Endrin Aldehyde	7421-93-4	N.D.	0.080	0.016	1
00177	Heptachlor	76-44-8	N.D.	0.0080	0.0016	1
00177	Heptachlor Epoxide	1024-57-3	N.D.	0.0080	0.0018	1
00177	Methoxychlor	72-43-5	N.D.	0.080	0.024	1
00177	Toxaphene	8001-35-2	N.D.	0.80	0.24	1
	Reporting limits were raised due to interference from the sample matrix.					
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07044	Antimony	7440-36-0	N.D.	20.0	7.7	1
07035	Arsenic	7440-38-2	205	20.0	9.7	1
07047	Beryllium	7440-41-7	N.D.	5.0	0.67	1
07049	Cadmium	7440-43-9	N.D.	5.0	0.49	1
07051	Chromium	7440-47-3	N.D.	15.0	1.8	1
07052	Cobalt	7440-48-4	N.D.	5.0	1.9	1
07053	Copper	7440-50-8	N.D.	10.0	4.1	1
07055	Lead	7439-92-1	N.D.	15.0	6.2	1
07061	Nickel	7440-02-0	N.D.	10.0	2.8	1
07036	Selenium	7782-49-2	N.D.	20.0	9.7	1
07066	Silver	7440-22-4	N.D.	5.0	1.9	1
07022	Thallium	7440-28-0	N.D.	30.0	9.4	1
07072	Zinc	7440-66-6	N.D.	20.0	5.4	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.20	0.050	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.
Because the site straddles the PA/DE line, the Pennsylvania Certification comment has been added to all samples submitted from the site.
This sample was field filtered for dissolved metals.

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

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW530L-062816-AH-010 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455691
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/28/2016 18:00 by AH

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4401 SDG#: MHF44-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10335	Modified PPL VOCs 8260	SW-846 8260B	1	W161872AA	07/06/2016	03:23	Kevin Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W161872AA	07/06/2016	03:23	Kevin Kelly	1
04678	TCL SW846 8270C Water	SW-846 8270C	1	16184WAH026	07/07/2016	12:11	Holly B Ziegler	1
00813	BNA Water Extraction	SW-846 3510C	1	16184WAH026	07/05/2016	09:00	Kate E Lutte	1
00177	PPL Pesticides	SW-846 8081A	1	161840011A	07/12/2016	06:29	Lisa A Reinert	1
11118	Pesticide Screen Waters Ext	SW-846 3510C	1	161840011A	07/05/2016	02:15	Sherry L Morrow	1
07044	Antimony	SW-846 6010B	1	161871848008	07/12/2016	16:31	Cindy M Gehman	1
07035	Arsenic	SW-846 6010B	1	161871848008	07/12/2016	16:31	Cindy M Gehman	1
07047	Beryllium	SW-846 6010B	1	161871848008	07/12/2016	16:31	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	161871848008	07/12/2016	16:31	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	161871848008	07/12/2016	16:31	Cindy M Gehman	1
07052	Cobalt	SW-846 6010B	1	161871848008	07/12/2016	16:31	Cindy M Gehman	1
07053	Copper	SW-846 6010B	1	161871848008	07/12/2016	16:31	Cindy M Gehman	1
07055	Lead	SW-846 6010B	1	161871848008	07/12/2016	16:31	Cindy M Gehman	1
07061	Nickel	SW-846 6010B	1	161871848008	07/12/2016	16:31	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	161871848008	07/14/2016	09:42	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	161871848008	07/12/2016	16:31	Cindy M Gehman	1
07022	Thallium	SW-846 6010B	1	161871848008	07/12/2016	16:31	Cindy M Gehman	1
07072	Zinc	SW-846 6010B	1	161871848008	07/12/2016	16:31	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	161875713010	07/13/2016	00:00	Parker D Lindstrom	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161871848008	07/11/2016	06:15	Lisa J Cooke	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161875713010	07/11/2016	08:25	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW533U-062916-RM-011 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455692
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 11:10 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4402 SDG#: MHF44-02

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	**ug/l**	
10335	Acrolein	107-02-8	N.D.		100	40	1
10335	Acrylonitrile	107-13-1	N.D.		20	4	1
10335	Benzene	71-43-2	1		1	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.		1	0.5	1
10335	Bromoform	75-25-2	N.D.		4	0.5	1
10335	Bromomethane	74-83-9	N.D.		1	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.		1	0.5	1
10335	Chlorobenzene	108-90-7	0.8	J	1	0.5	1
10335	Chloroethane	75-00-3	N.D.		1	0.5	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.		10	2	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.						
10335	Chloroform	67-66-3	N.D.		1	0.5	1
10335	Chloromethane	74-87-3	N.D.		1	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.		1	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.		1	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.		1	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.		1	0.5	1
10335	1,2-Dichloroethene (Total)	540-59-0	N.D.		1	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.		1	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		1	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		1	0.5	1
10335	Ethylbenzene	100-41-4	N.D.		1	0.5	1
10335	Methylene Chloride	75-09-2	N.D.		4	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.		1	0.5	1
10335	Toluene	108-88-3	N.D.		1	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.		1	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.		1	0.5	1
10335	Trichloroethene	79-01-6	N.D.		1	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.		1	0.5	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	
04678	Acenaphthene	83-32-9	0.3	J	0.5	0.1	1
04678	Acenaphthylene	208-96-8	N.D.		0.5	0.1	1
04678	Anthracene	120-12-7	N.D.		0.5	0.1	1
04678	Benzidine	92-87-5	N.D.		60	20	1
04678	Benzo(a)anthracene	56-55-3	N.D.		0.5	0.1	1
04678	Benzo(a)pyrene	50-32-8	N.D.		0.5	0.1	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.		0.5	0.1	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.		0.5	0.1	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.		0.5	0.1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.		1	0.5	1
04678	Butylbenzylphthalate	85-68-7	N.D.		5	2	1
04678	Di-n-butylphthalate	84-74-2	N.D.		5	2	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.		1	0.5	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.		1	0.5	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.		1	0.5	1
04678	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.		1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW533U-062916-RM-011 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455692
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 11:10 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4402 SDG#: MHF44-02

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	2-Chloronaphthalene	91-58-7	N.D.	1	0.4	1
04678	2-Chlorophenol	95-57-8	N.D.	1	0.5	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	1	0.5	1
04678	Chrysene	218-01-9	N.D.	0.5	0.1	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.5	0.1	1
04678	1,2-Dichlorobenzene	95-50-1	N.D.	1	0.5	1
04678	1,3-Dichlorobenzene	541-73-1	N.D.	1	0.5	1
04678	1,4-Dichlorobenzene	106-46-7	N.D.	1	0.5	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	5	2	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	1	0.5	1
04678	Diethylphthalate	84-66-2	N.D.	5	2	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	1	0.5	1
04678	Dimethylphthalate	131-11-3	N.D.	5	2	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	15	5	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	30	10	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	5	1	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	1	0.5	1
04678	1,2-Diphenylhydrazine	122-66-7	N.D.	1	0.5	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	2	1
04678	Fluoranthene	206-44-0	N.D.	0.5	0.1	1
04678	Fluorene	86-73-7	0.3 J	0.5	0.1	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.5	0.1	1
04678	Hexachlorobutadiene	87-68-3	N.D.	1	0.5	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	15	5	1
04678	Hexachloroethane	67-72-1	N.D.	5	1	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.5	0.1	1
04678	Isophorone	78-59-1	N.D.	1	0.5	1
04678	Naphthalene	91-20-3	N.D.	0.5	0.1	1
04678	Nitrobenzene	98-95-3	N.D.	1	0.5	1
04678	2-Nitrophenol	88-75-5	N.D.	1	0.5	1
04678	4-Nitrophenol	100-02-7	N.D.	30	10	1
04678	N-Nitrosodimethylamine	62-75-9	N.D.	5	2	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	1	0.5	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	1	0.5	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	5	2	1
04678	Pentachlorophenol	87-86-5	N.D.	5	1	1
04678	Phenanthrene	85-01-8	N.D.	0.5	0.1	1
04678	Phenol	108-95-2	N.D.	1	0.5	1
04678	Pyrene	129-00-0	N.D.	0.5	0.1	1
04678	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	0.5	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	1	0.5	1
Pesticides/PCBs	**SW-846 8081A**		**ug/l**	**ug/l**	**ug/l**	
00177	Aldrin	309-00-2	0.0066 J	0.0080	0.0016	1

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW533U-062916-RM-011 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455692
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 11:10 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4402 SDG#: MHF44-02

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081A**		**ug/l**		**ug/l**	**ug/l**	
00177	Alpha BHC	319-84-6	0.039		0.0080	0.0024	1
00177	Beta BHC	319-85-7	0.012	P	0.0080	0.0027	1
00177	Gamma BHC - Lindane	58-89-9	0.020	P	0.0080	0.0016	1
00177	Chlordane	57-74-9	N.D.		0.40	0.13	1
00177	p,p-DDD	72-54-8	0.0047	JP	0.016	0.0040	1
00177	p,p-DDE	72-55-9	N.D.	V	0.016	0.0055	1
00177	p,p-DDT	50-29-3	N.D.		0.016	0.0042	1
00177	Delta BHC	319-86-8	0.0095		0.0080	0.0027	1
00177	Dieldrin	60-57-1	N.D.		0.016	0.0043	1
00177	Endosulfan I	959-98-8	0.0080	J	0.0080	0.0035	1
00177	Endosulfan II	33213-65-9	N.D.		0.024	0.012	1
00177	Endosulfan Sulfate	1031-07-8	N.D.		0.016	0.0047	1
00177	Endrin	72-20-8	N.D.		0.016	0.0065	1
00177	Endrin Aldehyde	7421-93-4	N.D.		0.080	0.016	1
00177	Heptachlor	76-44-8	N.D.		0.0080	0.0016	1
00177	Heptachlor Epoxide	1024-57-3	0.0063	J	0.0080	0.0018	1
00177	Methoxychlor	72-43-5	N.D.		0.080	0.024	1
00177	Toxaphene	8001-35-2	N.D.		0.80	0.24	1

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

Metals Dissolved	**SW-846 6010B**		**ug/l**		**ug/l**	**ug/l**	
07044	Antimony	7440-36-0	N.D.		20.0	7.7	1
07035	Arsenic	7440-38-2	583		20.0	9.7	1
07047	Beryllium	7440-41-7	N.D.		5.0	0.67	1
07049	Cadmium	7440-43-9	N.D.		5.0	0.49	1
07051	Chromium	7440-47-3	4.3	J	15.0	1.8	1
07052	Cobalt	7440-48-4	26.4		5.0	1.9	1
07053	Copper	7440-50-8	N.D.		10.0	4.1	1
07055	Lead	7439-92-1	8.2	J	15.0	6.2	1
07061	Nickel	7440-02-0	4.9	J	10.0	2.8	1
07036	Selenium	7782-49-2	11.1	J	20.0	9.7	1
07066	Silver	7440-22-4	N.D.		5.0	1.9	1
07022	Thallium	7440-28-0	N.D.		30.0	9.4	1
07072	Zinc	7440-66-6	7.3	J	20.0	5.4	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.20	0.050	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.
Because the site straddles the PA/DE line, the Pennsylvania Certification comment has been added to all samples submitted from the site.
This sample was field filtered for dissolved metals.

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

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW533U-062916-RM-011 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455692
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 11:10 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4402 SDG#: MHF44-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10335	Modified PPL VOCs 8260	SW-846 8260B	1	W161872AA	07/06/2016	03:47	Kevin Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W161872AA	07/06/2016	03:47	Kevin Kelly	1
04678	TCL SW846 8270C Water	SW-846 8270C	1	16184WAH026	07/07/2016	12:39	Holly B Ziegler	1
00813	BNA Water Extraction	SW-846 3510C	1	16184WAH026	07/05/2016	09:00	Kate E Lutte	1
00177	PPL Pesticides	SW-846 8081A	1	161840011A	07/12/2016	06:43	Lisa A Reinert	1
11118	Pesticide Screen Waters Ext	SW-846 3510C	1	161840011A	07/05/2016	02:15	Sherry L Morrow	1
07044	Antimony	SW-846 6010B	1	161871848008	07/12/2016	17:12	Cindy M Gehman	1
07035	Arsenic	SW-846 6010B	1	161871848008	07/12/2016	17:12	Cindy M Gehman	1
07047	Beryllium	SW-846 6010B	1	161871848008	07/12/2016	17:12	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	161871848008	07/12/2016	17:12	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	161871848008	07/12/2016	17:12	Cindy M Gehman	1
07052	Cobalt	SW-846 6010B	1	161871848008	07/12/2016	17:12	Cindy M Gehman	1
07053	Copper	SW-846 6010B	1	161871848008	07/12/2016	17:12	Cindy M Gehman	1
07055	Lead	SW-846 6010B	1	161871848008	07/14/2016	00:19	Matthew R Machtinger	1
07061	Nickel	SW-846 6010B	1	161871848008	07/12/2016	17:12	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	161871848008	07/14/2016	10:25	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	161871848008	07/12/2016	17:12	Cindy M Gehman	1
07022	Thallium	SW-846 6010B	1	161871848008	07/12/2016	17:12	Cindy M Gehman	1
07072	Zinc	SW-846 6010B	1	161871848008	07/12/2016	17:12	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	161875713010	07/13/2016	00:23	Parker D Lindstrom	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161871848008	07/11/2016	06:15	Lisa J Cooke	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161875713010	07/11/2016	08:25	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW533L-062916-RM-012 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455693
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 12:55 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4403 SDG#: MHF44-03

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10335	Acrolein	107-02-8	N.D.	100	40	1
10335	Acrylonitrile	107-13-1	N.D.	20	4	1
10335	Benzene	71-43-2	N.D.	1	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	0.5	1
10335	Bromoform	75-25-2	N.D.	4	0.5	1
10335	Bromomethane	74-83-9	N.D.	1	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	1	0.5	1
10335	Chloroethane	75-00-3	N.D.	1	0.5	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	10	2	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.					
10335	Chloroform	67-66-3	N.D.	1	0.5	1
10335	Chloromethane	74-87-3	N.D.	1	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.	1	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	1	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	1	0.5	1
10335	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.5	1
10335	Ethylbenzene	100-41-4	N.D.	1	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	4	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	1	0.5	1
10335	Toluene	108-88-3	N.D.	1	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.5	1
10335	Trichloroethene	79-01-6	N.D.	1	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.	1	0.5	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
04678	Acenaphthene	83-32-9	N.D.	0.5	0.1	1
04678	Acenaphthylene	208-96-8	N.D.	0.5	0.1	1
04678	Anthracene	120-12-7	0.2 J	0.5	0.1	1
04678	Benzidine	92-87-5	N.D.	60	20	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.5	0.1	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.5	0.1	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.5	0.1	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.5	0.1	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.5	0.1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	1	0.5	1
04678	Butylbenzylphthalate	85-68-7	N.D.	5	2	1
04678	Di-n-butylphthalate	84-74-2	N.D.	5	2	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	1	0.5	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	1	0.5	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	1	0.5	1
04678	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW533L-062916-RM-012 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455693
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 12:55 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4403 SDG#: MHF44-03

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	2-Chloronaphthalene	91-58-7	N.D.	1	0.4	1
04678	2-Chlorophenol	95-57-8	N.D.	1	0.5	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	1	0.5	1
04678	Chrysene	218-01-9	N.D.	0.5	0.1	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.5	0.1	1
04678	1,2-Dichlorobenzene	95-50-1	N.D.	1	0.5	1
04678	1,3-Dichlorobenzene	541-73-1	N.D.	1	0.5	1
04678	1,4-Dichlorobenzene	106-46-7	N.D.	1	0.5	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	5	2	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	1	0.5	1
04678	Diethylphthalate	84-66-2	N.D.	5	2	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	1	0.5	1
04678	Dimethylphthalate	131-11-3	N.D.	5	2	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	15	5	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	30	10	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	5	1	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	1	0.5	1
04678	1,2-Diphenylhydrazine	122-66-7	N.D.	1	0.5	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	2	1
04678	Fluoranthene	206-44-0	N.D.	0.5	0.1	1
04678	Fluorene	86-73-7	N.D.	0.5	0.1	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.5	0.1	1
04678	Hexachlorobutadiene	87-68-3	N.D.	1	0.5	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	15	5	1
04678	Hexachloroethane	67-72-1	N.D.	5	1	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.5	0.1	1
04678	Isophorone	78-59-1	N.D.	1	0.5	1
04678	Naphthalene	91-20-3	N.D.	0.5	0.1	1
04678	Nitrobenzene	98-95-3	N.D.	1	0.5	1
04678	2-Nitrophenol	88-75-5	N.D.	1	0.5	1
04678	4-Nitrophenol	100-02-7	N.D.	30	10	1
04678	N-Nitrosodimethylamine	62-75-9	N.D.	5	2	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	1	0.5	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	1	0.5	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	5	2	1
04678	Pentachlorophenol	87-86-5	N.D.	5	1	1
04678	Phenanthrene	85-01-8	N.D.	0.5	0.1	1
04678	Phenol	108-95-2	N.D.	1	0.5	1
04678	Pyrene	129-00-0	N.D.	0.5	0.1	1
04678	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	0.5	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	1	0.5	1
Pesticides/PCBs	**SW-846 8081A**		**ug/l**	**ug/l**	**ug/l**	
00177	Aldrin	309-00-2	N.D.	0.0080	0.0016	1

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW533L-062916-RM-012 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455693
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 12:55 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4403 SDG#: MHF44-03

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081A**		**ug/l**		**ug/l**	**ug/l**	
00177	Alpha BHC	319-84-6	N.D.		0.0080	0.0024	1
00177	Beta BHC	319-85-7	0.0040	JP	0.0080	0.0027	1
00177	Gamma BHC - Lindane	58-89-9	N.D.	V	0.0080	0.0018	1
00177	Chlordane	57-74-9	N.D.		0.40	0.13	1
00177	p,p-DDD	72-54-8	N.D.		0.016	0.0040	1
00177	p,p-DDE	72-55-9	N.D.		0.016	0.0040	1
00177	p,p-DDT	50-29-3	N.D.		0.016	0.0042	1
00177	Delta BHC	319-86-8	N.D.		0.0080	0.0027	1
00177	Dieldrin	60-57-1	N.D.		0.016	0.0042	1
00177	Endosulfan I	959-98-8	N.D.	V	0.0080	0.0045	1
00177	Endosulfan II	33213-65-9	N.D.		0.024	0.012	1
00177	Endosulfan Sulfate	1031-07-8	N.D.		0.016	0.0046	1
00177	Endrin	72-20-8	N.D.		0.016	0.0065	1
00177	Endrin Aldehyde	7421-93-4	N.D.		0.080	0.016	1
00177	Heptachlor	76-44-8	N.D.		0.0080	0.0016	1
00177	Heptachlor Epoxide	1024-57-3	N.D.		0.0080	0.0018	1
00177	Methoxychlor	72-43-5	N.D.		0.080	0.024	1
00177	Toxaphene	8001-35-2	N.D.		0.80	0.24	1

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

Metals Dissolved	**SW-846 6010B**		**ug/l**		**ug/l**	**ug/l**	
07044	Antimony	7440-36-0	N.D.		20.0	7.7	1
07035	Arsenic	7440-38-2	34.9		20.0	9.7	1
07047	Beryllium	7440-41-7	N.D.		5.0	0.67	1
07049	Cadmium	7440-43-9	N.D.		5.0	0.49	1
07051	Chromium	7440-47-3	3.7	J	15.0	1.8	1
07052	Cobalt	7440-48-4	9.1		5.0	1.9	1
07053	Copper	7440-50-8	N.D.		10.0	4.1	1
07055	Lead	7439-92-1	N.D.		15.0	6.2	1
07061	Nickel	7440-02-0	3.7	J	10.0	2.8	1
07036	Selenium	7782-49-2	N.D.		20.0	9.7	1
07066	Silver	7440-22-4	N.D.		5.0	1.9	1
07022	Thallium	7440-28-0	N.D.		30.0	9.4	1
07072	Zinc	7440-66-6	5.7	J	20.0	5.4	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.20	0.050	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.
Because the site straddles the PA/DE line, the Pennsylvania Certification comment has been added to all samples submitted from the site.
This sample was field filtered for dissolved metals.

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

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW533L-062916-RM-012 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455693
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 12:55 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4403 SDG#: MHF44-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10335	Modified PPL VOCs 8260	SW-846 8260B	1	W161872AA	07/06/2016	04:10	Kevin Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W161872AA	07/06/2016	04:10	Kevin Kelly	1
04678	TCL SW846 8270C Water	SW-846 8270C	1	16184WAH026	07/07/2016	13:08	Holly B Ziegler	1
00813	BNA Water Extraction	SW-846 3510C	1	16184WAH026	07/05/2016	09:00	Kate E Lutte	1
00177	PPL Pesticides	SW-846 8081A	1	161840011A	07/12/2016	06:57	Lisa A Reinert	1
11118	Pesticide Screen Waters Ext	SW-846 3510C	1	161840011A	07/05/2016	02:15	Sherry L Morrow	1
07044	Antimony	SW-846 6010B	1	161871848008	07/12/2016	17:15	Cindy M Gehman	1
07035	Arsenic	SW-846 6010B	1	161871848008	07/12/2016	17:15	Cindy M Gehman	1
07047	Beryllium	SW-846 6010B	1	161871848008	07/12/2016	17:15	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	161871848008	07/12/2016	17:15	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	161871848008	07/12/2016	17:15	Cindy M Gehman	1
07052	Cobalt	SW-846 6010B	1	161871848008	07/12/2016	17:15	Cindy M Gehman	1
07053	Copper	SW-846 6010B	1	161871848008	07/12/2016	17:15	Cindy M Gehman	1
07055	Lead	SW-846 6010B	1	161871848008	07/14/2016	00:26	Matthew R Machtinger	1
07061	Nickel	SW-846 6010B	1	161871848008	07/12/2016	17:15	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	161871848008	07/14/2016	10:29	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	161871848008	07/12/2016	17:15	Cindy M Gehman	1
07022	Thallium	SW-846 6010B	1	161871848008	07/12/2016	17:15	Cindy M Gehman	1
07072	Zinc	SW-846 6010B	1	161871848008	07/12/2016	17:15	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	161875713010	07/13/2016	00:25	Parker D Lindstrom	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161871848008	07/11/2016	06:15	Lisa J Cooke	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161875713010	07/11/2016	08:25	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW551-062916-MM-013 Grab Groundwater Marcus Hook Facility AOI7

LL Sample # WW 8455694
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 13:15 by MM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4404 SDG#: MHF44-04

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10335	Acrolein	107-02-8	N.D.	100	40	1
10335	Acrylonitrile	107-13-1	N.D.	20	4	1
10335	Benzene	71-43-2	96	1	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	0.5	1
10335	Bromoform	75-25-2	N.D.	4	0.5	1
10335	Bromomethane	74-83-9	N.D.	1	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	1	0.5	1
10335	Chloroethane	75-00-3	N.D.	1	0.5	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	10	2	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.					
10335	Chloroform	67-66-3	N.D.	1	0.5	1
10335	Chloromethane	74-87-3	N.D.	1	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.	1	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	1	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	1	0.5	1
10335	1,2-Dichloroethene (Total)	540-59-0	1	1	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.5	1
10335	Ethylbenzene	100-41-4	2	1	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	4	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	1	0.5	1
10335	Toluene	108-88-3	N.D.	1	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.5	1
10335	Trichloroethene	79-01-6	N.D.	1	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.	1	0.5	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
04678	Acenaphthene	83-32-9	N.D.	0.5	0.1	1
04678	Acenaphthylene	208-96-8	N.D.	0.5	0.1	1
04678	Anthracene	120-12-7	N.D.	0.5	0.1	1
04678	Benzidine	92-87-5	N.D.	60	20	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.5	0.1	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.5	0.1	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.5	0.1	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.5	0.1	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.5	0.1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	1	0.5	1
04678	Butylbenzylphthalate	85-68-7	N.D.	5	2	1
04678	Di-n-butylphthalate	84-74-2	N.D.	5	2	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	1	0.5	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	1	0.5	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	1	0.5	1
04678	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW551-062916-MM-013 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455694
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 13:15 by MM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4404 SDG#: MHF44-04

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	2-Chloronaphthalene	91-58-7	N.D.	1	0.4	1
04678	2-Chlorophenol	95-57-8	N.D.	1	0.5	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	1	0.5	1
04678	Chrysene	218-01-9	N.D.	0.5	0.1	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.5	0.1	1
04678	1,2-Dichlorobenzene	95-50-1	N.D.	1	0.5	1
04678	1,3-Dichlorobenzene	541-73-1	N.D.	1	0.5	1
04678	1,4-Dichlorobenzene	106-46-7	N.D.	1	0.5	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	5	2	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	1	0.5	1
04678	Diethylphthalate	84-66-2	N.D.	5	2	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	1	0.5	1
04678	Dimethylphthalate	131-11-3	N.D.	5	2	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	15	5	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	30	10	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	5	1	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	1	0.5	1
04678	1,2-Diphenylhydrazine	122-66-7	N.D.	1	0.5	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	2	1
04678	Fluoranthene	206-44-0	N.D.	0.5	0.1	1
04678	Fluorene	86-73-7	N.D.	0.5	0.1	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.5	0.1	1
04678	Hexachlorobutadiene	87-68-3	N.D.	1	0.5	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	15	5	1
04678	Hexachloroethane	67-72-1	N.D.	5	1	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.5	0.1	1
04678	Isophorone	78-59-1	N.D.	1	0.5	1
04678	Naphthalene	91-20-3	N.D.	0.5	0.1	1
04678	Nitrobenzene	98-95-3	N.D.	1	0.5	1
04678	2-Nitrophenol	88-75-5	N.D.	1	0.5	1
04678	4-Nitrophenol	100-02-7	N.D.	30	10	1
04678	N-Nitrosodimethylamine	62-75-9	N.D.	5	2	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	1	0.5	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	1	0.5	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	5	2	1
04678	Pentachlorophenol	87-86-5	N.D.	5	1	1
04678	Phenanthrene	85-01-8	N.D.	0.5	0.1	1
04678	Phenol	108-95-2	N.D.	1	0.5	1
04678	Pyrene	129-00-0	N.D.	0.5	0.1	1
04678	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	0.5	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	1	0.5	1
Pesticides/PCBs	**SW-846 8081A**		**ug/l**	**ug/l**	**ug/l**	
00177	Aldrin	309-00-2	N.D.	0.040	0.0080	5

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW551-062916-MM-013 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455694
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 13:15 by MM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4404 SDG#: MHF44-04

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081A**		**ug/l**		**ug/l**	**ug/l**	
00177	Alpha BHC	319-84-6	N.D.		0.040	0.012	5
00177	Beta BHC	319-85-7	0.030	J	0.040	0.014	5
00177	Gamma BHC - Lindane	58-89-9	N.D.		0.040	0.0080	5
00177	Chlordane	57-74-9	N.D.		2.0	0.64	5
00177	p,p-DDD	72-54-8	N.D.		0.080	0.020	5
00177	p,p-DDE	72-55-9	N.D.		0.080	0.020	5
00177	p,p-DDT	50-29-3	N.D.		0.080	0.021	5
00177	Delta BHC	319-86-8	N.D.		0.040	0.014	5
00177	Dieldrin	60-57-1	N.D.		0.080	0.021	5
00177	Endosulfan I	959-98-8	N.D.		0.040	0.017	5
00177	Endosulfan II	33213-65-9	N.D.		0.12	0.060	5
00177	Endosulfan Sulfate	1031-07-8	N.D.		0.080	0.023	5
00177	Endrin	72-20-8	N.D.		0.080	0.032	5
00177	Endrin Aldehyde	7421-93-4	N.D.		0.40	0.080	5
00177	Heptachlor	76-44-8	N.D.		0.040	0.0080	5
00177	Heptachlor Epoxide	1024-57-3	N.D.		0.040	0.0092	5
00177	Methoxychlor	72-43-5	N.D.		0.40	0.12	5
00177	Toxaphene	8001-35-2	N.D.		4.0	1.2	5
Metals Dissolved	**SW-846 6010B**		**ug/l**		**ug/l**	**ug/l**	
07044	Antimony	7440-36-0	N.D.		20.0	7.7	1
07035	Arsenic	7440-38-2	N.D.		20.0	9.7	1
07047	Beryllium	7440-41-7	0.74	J	5.0	0.67	1
07049	Cadmium	7440-43-9	N.D.		5.0	0.49	1
07051	Chromium	7440-47-3	4.2	J	15.0	1.8	1
07052	Cobalt	7440-48-4	64.8		5.0	1.9	1
07053	Copper	7440-50-8	N.D.		10.0	4.1	1
07055	Lead	7439-92-1	7.0	J	15.0	6.2	1
07061	Nickel	7440-02-0	20.6		10.0	2.8	1
07036	Selenium	7782-49-2	12.6	J	20.0	9.7	1
07066	Silver	7440-22-4	N.D.		5.0	1.9	1
07022	Thallium	7440-28-0	N.D.		30.0	9.4	1
07072	Zinc	7440-66-6	105		20.0	5.4	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.20	0.050	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.
Because the site straddles the PA/DE line, the Pennsylvania Certification comment has been added to all samples submitted from the site.
This sample was field filtered for dissolved metals.

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

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW551-062916-MM-013 Grab Groundwater Marcus Hook Facility AOI7

LL Sample # WW 8455694
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 13:15 by MM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4404 SDG#: MHF44-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10335	Modified PPL VOCs 8260	SW-846 8260B	1	W161872AA	07/06/2016	04:34	Kevin Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W161872AA	07/06/2016	04:34	Kevin Kelly	1
04678	TCL SW846 8270C Water	SW-846 8270C	1	16184WAH026	07/07/2016	13:36	Holly B Ziegler	1
00813	BNA Water Extraction	SW-846 3510C	1	16184WAH026	07/05/2016	09:00	Kate E Lutte	1
00177	PPL Pesticides	SW-846 8081A	1	161840011A	07/12/2016	07:25	Lisa A Reinert	5
11118	Pesticide Screen Waters Ext	SW-846 3510C	1	161840011A	07/05/2016	02:15	Sherry L Morrow	1
07044	Antimony	SW-846 6010B	1	161871848008	07/12/2016	17:18	Cindy M Gehman	1
07035	Arsenic	SW-846 6010B	1	161871848008	07/12/2016	17:18	Cindy M Gehman	1
07047	Beryllium	SW-846 6010B	1	161871848008	07/12/2016	17:18	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	161871848008	07/12/2016	17:18	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	161871848008	07/12/2016	17:18	Cindy M Gehman	1
07052	Cobalt	SW-846 6010B	1	161871848008	07/12/2016	17:18	Cindy M Gehman	1
07053	Copper	SW-846 6010B	1	161871848008	07/12/2016	17:18	Cindy M Gehman	1
07055	Lead	SW-846 6010B	1	161871848008	07/14/2016	00:30	Matthew R Machtinger	1
07061	Nickel	SW-846 6010B	1	161871848008	07/12/2016	17:18	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	161871848008	07/14/2016	10:32	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	161871848008	07/12/2016	17:18	Cindy M Gehman	1
07022	Thallium	SW-846 6010B	1	161871848008	07/12/2016	17:18	Cindy M Gehman	1
07072	Zinc	SW-846 6010B	1	161871848008	07/12/2016	17:18	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	161875713010	07/13/2016	00:27	Parker D Lindstrom	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161871848008	07/11/2016	06:15	Lisa J Cooke	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161875713010	07/11/2016	08:25	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW552-062916-AH-014 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455695
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 12:35 by AH

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4405 SDG#: MHF44-05

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10335	Acrolein	107-02-8	N.D.	100	40	1
10335	Acrylonitrile	107-13-1	N.D.	20	4	1
10335	Benzene	71-43-2	N.D.	1	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	0.5	1
10335	Bromoform	75-25-2	N.D.	4	0.5	1
10335	Bromomethane	74-83-9	N.D.	1	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	1	0.5	1
10335	Chloroethane	75-00-3	N.D.	1	0.5	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	10	2	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.					
10335	Chloroform	67-66-3	N.D.	1	0.5	1
10335	Chloromethane	74-87-3	N.D.	1	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.	1	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	1	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	1	0.5	1
10335	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.5	1
10335	Ethylbenzene	100-41-4	N.D.	1	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	4	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	1	0.5	1
10335	Toluene	108-88-3	N.D.	1	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.5	1
10335	Trichloroethene	79-01-6	N.D.	1	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.	1	0.5	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
04678	Acenaphthene	83-32-9	N.D.	0.5	0.1	1
04678	Acenaphthylene	208-96-8	N.D.	0.5	0.1	1
04678	Anthracene	120-12-7	N.D.	0.5	0.1	1
04678	Benzidine	92-87-5	N.D.	62	21	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.5	0.1	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.5	0.1	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.5	0.1	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.5	0.1	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.5	0.1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	1	0.5	1
04678	Butylbenzylphthalate	85-68-7	N.D.	5	2	1
04678	Di-n-butylphthalate	84-74-2	N.D.	5	2	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	1	0.5	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	1	0.5	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	1	0.5	1
04678	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW552-062916-AH-014 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455695
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 12:35 by AH

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4405 SDG#: MHF44-05

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	2-Chloronaphthalene	91-58-7	N.D.	1	0.4	1
04678	2-Chlorophenol	95-57-8	N.D.	1	0.5	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	1	0.5	1
04678	Chrysene	218-01-9	N.D.	0.5	0.1	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.5	0.1	1
04678	1,2-Dichlorobenzene	95-50-1	N.D.	1	0.5	1
04678	1,3-Dichlorobenzene	541-73-1	N.D.	1	0.5	1
04678	1,4-Dichlorobenzene	106-46-7	N.D.	1	0.5	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	5	2	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	1	0.5	1
04678	Diethylphthalate	84-66-2	N.D.	5	2	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	1	0.5	1
04678	Dimethylphthalate	131-11-3	N.D.	5	2	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	15	5	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	31	10	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	5	1	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	1	0.5	1
04678	1,2-Diphenylhydrazine	122-66-7	N.D.	1	0.5	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	2	1
04678	Fluoranthene	206-44-0	N.D.	0.5	0.1	1
04678	Fluorene	86-73-7	N.D.	0.5	0.1	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.5	0.1	1
04678	Hexachlorobutadiene	87-68-3	N.D.	1	0.5	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	15	5	1
04678	Hexachloroethane	67-72-1	N.D.	5	1	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.5	0.1	1
04678	Isophorone	78-59-1	N.D.	1	0.5	1
04678	Naphthalene	91-20-3	N.D.	0.5	0.1	1
04678	Nitrobenzene	98-95-3	N.D.	1	0.5	1
04678	2-Nitrophenol	88-75-5	N.D.	1	0.5	1
04678	4-Nitrophenol	100-02-7	N.D.	31	10	1
04678	N-Nitrosodimethylamine	62-75-9	N.D.	5	2	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	1	0.5	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	1	0.5	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	5	2	1
04678	Pentachlorophenol	87-86-5	N.D.	5	1	1
04678	Phenanthrene	85-01-8	N.D.	0.5	0.1	1
04678	Phenol	108-95-2	N.D.	1	0.5	1
04678	Pyrene	129-00-0	N.D.	0.5	0.1	1
04678	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	0.5	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	1	0.5	1
Pesticides/PCBs	**SW-846 8081A**		**ug/l**	**ug/l**	**ug/l**	
00177	Aldrin	309-00-2	N.D.	0.0079	0.0016	1

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW552-062916-AH-014 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455695
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 12:35 by AH

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4405 SDG#: MHF44-05

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081A**		**ug/l**	**ug/l**	**ug/l**	
00177	Alpha BHC	319-84-6	N.D.	0.0079	0.0024	1
00177	Beta BHC	319-85-7	N.D.	0.0079	0.0027	1
00177	Gamma BHC - Lindane	58-89-9	N.D.	0.0079	0.0016	1
00177	Chlordane	57-74-9	N.D.	0.40	0.13	1
00177	p,p-DDD	72-54-8	N.D.	0.016	0.0040	1
00177	p,p-DDE	72-55-9	N.D.	0.016	0.0040	1
00177	p,p-DDT	50-29-3	N.D.	0.016	0.0041	1
00177	Delta BHC	319-86-8	N.D.	0.0079	0.0027	1
00177	Dieldrin	60-57-1	N.D.	0.016	0.0042	1
00177	Endosulfan I	959-98-8	N.D.	0.0079	0.0034	1
00177	Endosulfan II	33213-65-9	N.D.	0.024	0.012	1
00177	Endosulfan Sulfate	1031-07-8	N.D.	0.016	0.0046	1
00177	Endrin	72-20-8	N.D.	0.016	0.0064	1
00177	Endrin Aldehyde	7421-93-4	N.D.	0.079	0.016	1
00177	Heptachlor	76-44-8	0.0034 JP	0.0079	0.0016	1
00177	Heptachlor Epoxide	1024-57-3	0.019 P	0.0079	0.0018	1
00177	Methoxychlor	72-43-5	N.D.	0.079	0.024	1
00177	Toxaphene	8001-35-2	N.D.	0.79	0.24	1
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07044	Antimony	7440-36-0	N.D.	20.0	7.7	1
07035	Arsenic	7440-38-2	N.D.	20.0	9.7	1
07047	Beryllium	7440-41-7	N.D.	5.0	0.67	1
07049	Cadmium	7440-43-9	N.D.	5.0	0.49	1
07051	Chromium	7440-47-3	N.D.	15.0	1.8	1
07052	Cobalt	7440-48-4	4.2 J	5.0	1.9	1
07053	Copper	7440-50-8	N.D.	10.0	4.1	1
07055	Lead	7439-92-1	N.D.	15.0	6.2	1
07061	Nickel	7440-02-0	3.2 J	10.0	2.8	1
07036	Selenium	7782-49-2	N.D.	20.0	9.7	1
07066	Silver	7440-22-4	N.D.	5.0	1.9	1
07022	Thallium	7440-28-0	N.D.	30.0	9.4	1
07072	Zinc	7440-66-6	17.8 J	20.0	5.4	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.20	0.050	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.
Because the site straddles the PA/DE line, the Pennsylvania Certification comment has been added to all samples submitted from the site.
This sample was field filtered for dissolved metals.

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

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW552-062916-AH-014 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455695
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 12:35 by AH

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4405 SDG#: MHF44-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10335	Modified PPL VOCs 8260	SW-846 8260B	1	W161872AA	07/06/2016	04:58	Kevin Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W161872AA	07/06/2016	04:58	Kevin Kelly	1
04678	TCL SW846 8270C Water	SW-846 8270C	1	16184WAH026	07/07/2016	14:04	Holly B Ziegler	1
00813	BNA Water Extraction	SW-846 3510C	1	16184WAH026	07/05/2016	09:00	Kate E Lutte	1
00177	PPL Pesticides	SW-846 8081A	1	161840011A	07/12/2016	09:01	Lisa A Reinert	1
11118	Pesticide Screen Waters Ext	SW-846 3510C	1	161840011A	07/05/2016	02:15	Sherry L Morrow	1
07044	Antimony	SW-846 6010B	1	161871848008	07/12/2016	17:22	Cindy M Gehman	1
07035	Arsenic	SW-846 6010B	1	161871848008	07/12/2016	17:22	Cindy M Gehman	1
07047	Beryllium	SW-846 6010B	1	161871848008	07/12/2016	17:22	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	161871848008	07/12/2016	17:22	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	161871848008	07/12/2016	17:22	Cindy M Gehman	1
07052	Cobalt	SW-846 6010B	1	161871848008	07/12/2016	17:22	Cindy M Gehman	1
07053	Copper	SW-846 6010B	1	161871848008	07/12/2016	17:22	Cindy M Gehman	1
07055	Lead	SW-846 6010B	1	161871848008	07/14/2016	00:33	Matthew R Machtinger	1
07061	Nickel	SW-846 6010B	1	161871848008	07/12/2016	17:22	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	161871848008	07/14/2016	10:36	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	161871848008	07/12/2016	17:22	Cindy M Gehman	1
07022	Thallium	SW-846 6010B	1	161871848008	07/12/2016	17:22	Cindy M Gehman	1
07072	Zinc	SW-846 6010B	1	161871848008	07/12/2016	17:22	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	161875713010	07/13/2016	00:29	Parker D Lindstrom	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161871848008	07/11/2016	06:15	Lisa J Cooke	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161875713010	07/11/2016	08:25	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW540-062916-RM-015 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455696
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 15:20 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4406 SDG#: MHF44-06

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10335	Acrolein	107-02-8	N.D.	100	40	1
10335	Acrylonitrile	107-13-1	N.D.	20	4	1
10335	Benzene	71-43-2	57	1	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	0.5	1
10335	Bromoform	75-25-2	N.D.	4	0.5	1
10335	Bromomethane	74-83-9	N.D.	1	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	0.5	1
10335	Chlorobenzene	108-90-7	11	1	0.5	1
10335	Chloroethane	75-00-3	N.D.	1	0.5	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	10	2	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.					
10335	Chloroform	67-66-3	N.D.	1	0.5	1
10335	Chloromethane	74-87-3	N.D.	1	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.	1	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	1	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	1	0.5	1
10335	1,2-Dichloroethene (Total)	540-59-0	7	1	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.5	1
10335	Ethylbenzene	100-41-4	N.D.	1	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	4	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	1	0.5	1
10335	Toluene	108-88-3	N.D.	1	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.5	1
10335	Trichloroethene	79-01-6	N.D.	1	0.5	1
10335	Vinyl Chloride	75-01-4	1	1	0.5	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
04678	Acenaphthene	83-32-9	N.D.	0.5	0.1	1
04678	Acenaphthylene	208-96-8	N.D.	0.5	0.1	1
04678	Anthracene	120-12-7	N.D.	0.5	0.1	1
04678	Benzidine	92-87-5	N.D.	60	20	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.5	0.1	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.5	0.1	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.5	0.1	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.5	0.1	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.5	0.1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	1	0.5	1
04678	Butylbenzylphthalate	85-68-7	N.D.	5	2	1
04678	Di-n-butylphthalate	84-74-2	N.D.	5	2	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	1	0.5	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	1	0.5	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	1	0.5	1
04678	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW540-062916-RM-015 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455696
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 15:20 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4406 SDG#: MHF44-06

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	2-Chloronaphthalene	91-58-7	N.D.	1	0.4	1
04678	2-Chlorophenol	95-57-8	N.D.	1	0.5	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	1	0.5	1
04678	Chrysene	218-01-9	N.D.	0.5	0.1	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.5	0.1	1
04678	1,2-Dichlorobenzene	95-50-1	N.D.	1	0.5	1
04678	1,3-Dichlorobenzene	541-73-1	N.D.	1	0.5	1
04678	1,4-Dichlorobenzene	106-46-7	N.D.	1	0.5	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	5	2	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	1	0.5	1
04678	Diethylphthalate	84-66-2	N.D.	5	2	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	1	0.5	1
04678	Dimethylphthalate	131-11-3	N.D.	5	2	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	15	5	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	30	10	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	5	1	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	1	0.5	1
04678	1,2-Diphenylhydrazine	122-66-7	N.D.	1	0.5	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	2	1
04678	Fluoranthene	206-44-0	N.D.	0.5	0.1	1
04678	Fluorene	86-73-7	N.D.	0.5	0.1	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.5	0.1	1
04678	Hexachlorobutadiene	87-68-3	N.D.	1	0.5	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	15	5	1
04678	Hexachloroethane	67-72-1	N.D.	5	1	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.5	0.1	1
04678	Isophorone	78-59-1	N.D.	1	0.5	1
04678	Naphthalene	91-20-3	N.D.	0.5	0.1	1
04678	Nitrobenzene	98-95-3	N.D.	1	0.5	1
04678	2-Nitrophenol	88-75-5	N.D.	1	0.5	1
04678	4-Nitrophenol	100-02-7	N.D.	30	10	1
04678	N-Nitrosodimethylamine	62-75-9	N.D.	5	2	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	1	0.5	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	1	0.5	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	5	2	1
04678	Pentachlorophenol	87-86-5	N.D.	5	1	1
04678	Phenanthrene	85-01-8	N.D.	0.5	0.1	1
04678	Phenol	108-95-2	N.D.	1	0.5	1
04678	Pyrene	129-00-0	N.D.	0.5	0.1	1
04678	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	0.5	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	1	0.5	1
Pesticides/PCBs	**SW-846 8081A**		**ug/l**	**ug/l**	**ug/l**	
00177	Aldrin	309-00-2	N.D.	0.0082	0.0016	1

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW540-062916-RM-015 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455696
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 15:20 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4406 SDG#: MHF44-06

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081A**		**ug/l**	**ug/l**	**ug/l**	
00177	Alpha BHC	319-84-6	N.D.	0.0082	0.0025	1
00177	Beta BHC	319-85-7	0.0039 JP	0.0082	0.0028	1
00177	Gamma BHC - Lindane	58-89-9	N.D.	0.0082	0.0016	1
00177	Chlordane	57-74-9	N.D.	0.41	0.13	1
00177	p,p-DDD	72-54-8	N.D.	0.016	0.0041	1
00177	p,p-DDE	72-55-9	N.D.	0.016	0.0041	1
00177	p,p-DDT	50-29-3	N.D.	0.016	0.0043	1
00177	Delta BHC	319-86-8	N.D.	0.0082	0.0028	1
00177	Dieldrin	60-57-1	N.D.	0.016	0.0043	1
00177	Endosulfan I	959-98-8	0.018	0.0082	0.0035	1
00177	Endosulfan II	33213-65-9	N.D.	0.025	0.012	1
00177	Endosulfan Sulfate	1031-07-8	N.D.	0.016	0.0048	1
00177	Endrin	72-20-8	N.D.	0.016	0.0066	1
00177	Endrin Aldehyde	7421-93-4	N.D.	0.082	0.016	1
00177	Heptachlor	76-44-8	0.0019 JP	0.0082	0.0016	1
00177	Heptachlor Epoxide	1024-57-3	N.D.	0.0082	0.0019	1
00177	Methoxychlor	72-43-5	N.D.	0.082	0.025	1
00177	Toxaphene	8001-35-2	N.D.	0.82	0.25	1
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07044	Antimony	7440-36-0	N.D.	20.0	7.7	1
07035	Arsenic	7440-38-2	18.2 J	20.0	9.7	1
07047	Beryllium	7440-41-7	N.D.	5.0	0.67	1
07049	Cadmium	7440-43-9	N.D.	5.0	0.49	1
07051	Chromium	7440-47-3	2.3 J	15.0	1.8	1
07052	Cobalt	7440-48-4	5.8	5.0	1.9	1
07053	Copper	7440-50-8	N.D.	10.0	4.1	1
07055	Lead	7439-92-1	11.8 J	15.0	6.2	1
07061	Nickel	7440-02-0	N.D.	10.0	2.8	1
07036	Selenium	7782-49-2	N.D.	20.0	9.7	1
07066	Silver	7440-22-4	N.D.	5.0	1.9	1
07022	Thallium	7440-28-0	N.D.	30.0	9.4	1
07072	Zinc	7440-66-6	56.6	20.0	5.4	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.20	0.050	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.
Because the site straddles the PA/DE line, the Pennsylvania Certification comment has been added to all samples submitted from the site.
This sample was field filtered for dissolved metals.

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

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW540-062916-RM-015 Grab Groundwater Marcus Hook Facility AOI7

LL Sample # WW 8455696
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 15:20 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4406 SDG#: MHF44-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10335	Modified PPL VOCs 8260	SW-846 8260B	1	W161872AA	07/06/2016	05:22	Kevin Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W161872AA	07/06/2016	05:22	Kevin Kelly	1
04678	TCL SW846 8270C Water	SW-846 8270C	1	16184WAH026	07/07/2016	14:33	Holly B Ziegler	1
00813	BNA Water Extraction	SW-846 3510C	1	16184WAH026	07/05/2016	09:00	Kate E Lutte	1
00177	PPL Pesticides	SW-846 8081A	1	161840011A	07/12/2016	09:15	Lisa A Reinert	1
11118	Pesticide Screen Waters Ext	SW-846 3510C	1	161840011A	07/05/2016	02:15	Sherry L Morrow	1
07044	Antimony	SW-846 6010B	1	161871848008	07/12/2016	17:25	Cindy M Gehman	1
07035	Arsenic	SW-846 6010B	1	161871848008	07/12/2016	17:25	Cindy M Gehman	1
07047	Beryllium	SW-846 6010B	1	161871848008	07/12/2016	17:25	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	161871848008	07/12/2016	17:25	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	161871848008	07/12/2016	17:25	Cindy M Gehman	1
07052	Cobalt	SW-846 6010B	1	161871848008	07/12/2016	17:25	Cindy M Gehman	1
07053	Copper	SW-846 6010B	1	161871848008	07/12/2016	17:25	Cindy M Gehman	1
07055	Lead	SW-846 6010B	1	161871848008	07/14/2016	00:36	Matthew R Machtinger	1
07061	Nickel	SW-846 6010B	1	161871848008	07/12/2016	17:25	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	161871848008	07/14/2016	10:39	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	161871848008	07/12/2016	17:25	Cindy M Gehman	1
07022	Thallium	SW-846 6010B	1	161871848008	07/12/2016	17:25	Cindy M Gehman	1
07072	Zinc	SW-846 6010B	1	161871848008	07/12/2016	17:25	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	161875713010	07/13/2016	00:31	Parker D Lindstrom	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161871848008	07/11/2016	06:15	Lisa J Cooke	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161875713010	07/11/2016	08:25	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW539-062916-AH-016 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455697
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 17:05 by AH

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4407 SDG#: MHF44-07

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	**ug/l**	
10335	Acrolein	107-02-8	N.D.		100	40	1
10335	Acrylonitrile	107-13-1	N.D.		20	4	1
10335	Benzene	71-43-2	4		1	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.		1	0.5	1
10335	Bromoform	75-25-2	N.D.		4	0.5	1
10335	Bromomethane	74-83-9	N.D.		1	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.		1	0.5	1
10335	Chlorobenzene	108-90-7	N.D.		1	0.5	1
10335	Chloroethane	75-00-3	N.D.		1	0.5	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.		10	2	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.						
10335	Chloroform	67-66-3	N.D.		1	0.5	1
10335	Chloromethane	74-87-3	N.D.		1	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.		1	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.		1	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.		1	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.		1	0.5	1
10335	1,2-Dichloroethene (Total)	540-59-0	N.D.		1	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.		1	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		1	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		1	0.5	1
10335	Ethylbenzene	100-41-4	2		1	0.5	1
10335	Methylene Chloride	75-09-2	N.D.		4	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.		1	0.5	1
10335	Toluene	108-88-3	N.D.		1	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.		1	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.		1	0.5	1
10335	Trichloroethene	79-01-6	N.D.		1	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.		1	0.5	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	
04678	Acenaphthene	83-32-9	3		0.5	0.1	1
04678	Acenaphthylene	208-96-8	N.D.		0.5	0.1	1
04678	Anthracene	120-12-7	0.4	J	0.5	0.1	1
04678	Benzidine	92-87-5	N.D.		60	20	1
04678	Benzo(a)anthracene	56-55-3	N.D.		0.5	0.1	1
04678	Benzo(a)pyrene	50-32-8	N.D.		0.5	0.1	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.		0.5	0.1	1
04678	Benzo(g,h,i)perylene	191-24-2	0.2	J	0.5	0.1	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.		0.5	0.1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.		1	0.5	1
04678	Butylbenzylphthalate	85-68-7	N.D.		5	2	1
04678	Di-n-butylphthalate	84-74-2	N.D.		5	2	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.		1	0.5	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.		1	0.5	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.		1	0.5	1
04678	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.		1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW539-062916-AH-016 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455697
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 17:05 by AH

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4407 SDG#: MHF44-07

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	2-Chloronaphthalene	91-58-7	N.D.	1	0.4	1
04678	2-Chlorophenol	95-57-8	N.D.	1	0.5	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	1	0.5	1
04678	Chrysene	218-01-9	N.D.	0.5	0.1	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.5	0.1	1
04678	1,2-Dichlorobenzene	95-50-1	N.D.	1	0.5	1
04678	1,3-Dichlorobenzene	541-73-1	N.D.	1	0.5	1
04678	1,4-Dichlorobenzene	106-46-7	N.D.	1	0.5	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	5	2	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	1	0.5	1
04678	Diethylphthalate	84-66-2	N.D.	5	2	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	1	0.5	1
04678	Dimethylphthalate	131-11-3	N.D.	5	2	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	15	5	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	30	10	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	5	1	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	1	0.5	1
04678	1,2-Diphenylhydrazine	122-66-7	N.D.	1	0.5	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	2	1
04678	Fluoranthene	206-44-0	N.D.	0.5	0.1	1
04678	Fluorene	86-73-7	5	0.5	0.1	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.5	0.1	1
04678	Hexachlorobutadiene	87-68-3	N.D.	1	0.5	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	15	5	1
04678	Hexachloroethane	67-72-1	N.D.	5	1	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.5	0.1	1
04678	Isophorone	78-59-1	N.D.	1	0.5	1
04678	Naphthalene	91-20-3	0.6	0.5	0.1	1
04678	Nitrobenzene	98-95-3	N.D.	1	0.5	1
04678	2-Nitrophenol	88-75-5	N.D.	1	0.5	1
04678	4-Nitrophenol	100-02-7	N.D.	30	10	1
04678	N-Nitrosodimethylamine	62-75-9	N.D.	5	2	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	1	0.5	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	1	0.5	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	5	2	1
04678	Pentachlorophenol	87-86-5	N.D.	5	1	1
04678	Phenanthrene	85-01-8	0.4 J	0.5	0.1	1
04678	Phenol	108-95-2	N.D.	1	0.5	1
04678	Pyrene	129-00-0	1	0.5	0.1	1
04678	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	0.5	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	1	0.5	1
Pesticides/PCBs	**SW-846 8081A**		**ug/l**	**ug/l**	**ug/l**	
00177	Aldrin	309-00-2	N.D.	0.040	0.0080	5

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW539-062916-AH-016 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455697
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 17:05 by AH

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4407 SDG#: MHF44-07

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081A**		**ug/l**		**ug/l**	**ug/l**	
00177	Alpha BHC	319-84-6	0.062		0.040	0.012	5
00177	Beta BHC	319-85-7	0.038	JP	0.040	0.014	5
00177	Gamma BHC - Lindane	58-89-9	N.D.		0.040	0.0080	5
00177	Chlordane	57-74-9	N.D.		2.0	0.64	5
00177	p,p-DDD	72-54-8	N.D.		0.080	0.020	5
00177	p,p-DDE	72-55-9	N.D.		0.080	0.020	5
00177	p,p-DDT	50-29-3	N.D.		0.080	0.021	5
00177	Delta BHC	319-86-8	N.D.		0.040	0.014	5
00177	Dieldrin	60-57-1	N.D.		0.080	0.021	5
00177	Endosulfan I	959-98-8	N.D.		0.040	0.017	5
00177	Endosulfan II	33213-65-9	N.D.		0.12	0.060	5
00177	Endosulfan Sulfate	1031-07-8	N.D.		0.080	0.023	5
00177	Endrin	72-20-8	N.D.		0.080	0.032	5
00177	Endrin Aldehyde	7421-93-4	N.D.		0.40	0.080	5
00177	Heptachlor	76-44-8	N.D.		0.040	0.0080	5
00177	Heptachlor Epoxide	1024-57-3	N.D.		0.040	0.0092	5
00177	Methoxychlor	72-43-5	N.D.		0.40	0.12	5
00177	Toxaphene	8001-35-2	N.D.		4.0	1.2	5

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

Metals Dissolved	**SW-846 6010B**		**ug/l**		**ug/l**	**ug/l**	
07044	Antimony	7440-36-0	N.D.		20.0	7.7	1
07035	Arsenic	7440-38-2	12.8	J	20.0	9.7	1
07047	Beryllium	7440-41-7	N.D.		5.0	0.67	1
07049	Cadmium	7440-43-9	N.D.		5.0	0.49	1
07051	Chromium	7440-47-3	5.6	J	15.0	1.8	1
07052	Cobalt	7440-48-4	N.D.		5.0	1.9	1
07053	Copper	7440-50-8	58.4		10.0	4.1	1
07055	Lead	7439-92-1	67.0		15.0	6.2	1
07061	Nickel	7440-02-0	N.D.		10.0	2.8	1
07036	Selenium	7782-49-2	N.D.		20.0	9.7	1
07066	Silver	7440-22-4	N.D.		5.0	1.9	1
07022	Thallium	7440-28-0	N.D.		30.0	9.4	1
07072	Zinc	7440-66-6	52.6		20.0	5.4	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.12	J	0.20	0.050	1

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW539-062916-AH-016 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455697
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 17:05 by AH

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4407 SDG#: MHF44-07

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.
Because the site straddles the PA/DE line, the Pennsylvania Certification comment has been added to all samples submitted from the site.
This sample was field filtered for dissolved metals.

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	Modified PPL VOCs 8260	SW-846 8260B	1	W161872AA	07/06/2016	05:46	Kevin Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W161872AA	07/06/2016	05:46	Kevin Kelly	1
04678	TCL SW846 8270C Water	SW-846 8270C	1	16184WAH026	07/07/2016	15:01	Holly B Ziegler	1
00813	BNA Water Extraction	SW-846 3510C	1	16184WAH026	07/05/2016	09:00	Kate E Lutte	1
00177	PPL Pesticides	SW-846 8081A	1	161840011A	07/12/2016	09:42	Lisa A Reinert	5
11118	Pesticide Screen Waters Ext	SW-846 3510C	1	161840011A	07/05/2016	02:15	Sherry L Morrow	1
07044	Antimony	SW-846 6010B	1	161871848008	07/12/2016	17:28	Cindy M Gehman	1
07035	Arsenic	SW-846 6010B	1	161871848008	07/12/2016	17:28	Cindy M Gehman	1
07047	Beryllium	SW-846 6010B	1	161871848008	07/12/2016	17:28	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	161871848008	07/12/2016	17:28	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	161871848008	07/12/2016	17:28	Cindy M Gehman	1
07052	Cobalt	SW-846 6010B	1	161871848008	07/12/2016	17:28	Cindy M Gehman	1
07053	Copper	SW-846 6010B	1	161871848008	07/12/2016	17:28	Cindy M Gehman	1
07055	Lead	SW-846 6010B	1	161871848008	07/12/2016	17:28	Cindy M Gehman	1
07061	Nickel	SW-846 6010B	1	161871848008	07/12/2016	17:28	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	161871848008	07/14/2016	10:42	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	161871848008	07/12/2016	17:28	Cindy M Gehman	1
07022	Thallium	SW-846 6010B	1	161871848008	07/12/2016	17:28	Cindy M Gehman	1
07072	Zinc	SW-846 6010B	1	161871848008	07/12/2016	17:28	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	161875713010	07/13/2016	00:33	Parker D Lindstrom	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161871848008	07/11/2016	06:15	Lisa J Cooke	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161875713010	07/11/2016	08:25	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW184-062916-MM-018 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455698
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 17:00 by MM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4408 SDG#: MHF44-08

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	**ug/l**	
10335	Acrolein	107-02-8	N.D.		100	40	1
10335	Acrylonitrile	107-13-1	N.D.		20	4	1
10335	Benzene	71-43-2	N.D.		1	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.		1	0.5	1
10335	Bromoform	75-25-2	N.D.		4	0.5	1
10335	Bromomethane	74-83-9	N.D.		1	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.		1	0.5	1
10335	Chlorobenzene	108-90-7	N.D.		1	0.5	1
10335	Chloroethane	75-00-3	N.D.		1	0.5	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.		10	2	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.						
10335	Chloroform	67-66-3	N.D.		1	0.5	1
10335	Chloromethane	74-87-3	N.D.		1	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.		1	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.		1	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.		1	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.		1	0.5	1
10335	1,2-Dichloroethene (Total)	540-59-0	N.D.		1	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.		1	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		1	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		1	0.5	1
10335	Ethylbenzene	100-41-4	N.D.		1	0.5	1
10335	Methylene Chloride	75-09-2	N.D.		4	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.		1	0.5	1
10335	Toluene	108-88-3	N.D.		1	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.		1	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.		1	0.5	1
10335	Trichloroethene	79-01-6	N.D.		1	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.		1	0.5	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	
04678	Acenaphthene	83-32-9	0.7		0.5	0.1	1
04678	Acenaphthylene	208-96-8	N.D.		0.5	0.1	1
04678	Anthracene	120-12-7	0.5	J	0.5	0.1	1
04678	Benzidine	92-87-5	N.D.		60	20	1
04678	Benzo(a)anthracene	56-55-3	0.3	J	0.5	0.1	1
04678	Benzo(a)pyrene	50-32-8	0.3	J	0.5	0.1	1
04678	Benzo(b)fluoranthene	205-99-2	0.2	J	0.5	0.1	1
04678	Benzo(g,h,i)perylene	191-24-2	0.2	J	0.5	0.1	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.		0.5	0.1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.		1	0.5	1
04678	Butylbenzylphthalate	85-68-7	N.D.		5	2	1
04678	Di-n-butylphthalate	84-74-2	N.D.		5	2	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.		1	0.5	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.		1	0.5	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.		1	0.5	1
04678	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.		1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW184-062916-MM-018 Grab Groundwater Marcus Hook Facility AOI7

LL Sample # WW 8455698
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 17:00 by MM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4408 SDG#: MHF44-08

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
04678	2-Chloronaphthalene	91-58-7	N.D.		1	0.4	1
04678	2-Chlorophenol	95-57-8	N.D.		1	0.5	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.		1	0.5	1
04678	Chrysene	218-01-9	0.7		0.5	0.1	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.		0.5	0.1	1
04678	1,2-Dichlorobenzene	95-50-1	N.D.		1	0.5	1
04678	1,3-Dichlorobenzene	541-73-1	N.D.		1	0.5	1
04678	1,4-Dichlorobenzene	106-46-7	N.D.		1	0.5	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.		5	2	1
04678	2,4-Dichlorophenol	120-83-2	N.D.		1	0.5	1
04678	Diethylphthalate	84-66-2	N.D.		5	2	1
04678	2,4-Dimethylphenol	105-67-9	N.D.		1	0.5	1
04678	Dimethylphthalate	131-11-3	N.D.		5	2	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.		15	5	1
04678	2,4-Dinitrophenol	51-28-5	N.D.		30	10	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.		5	1	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.		1	0.5	1
04678	1,2-Diphenylhydrazine	122-66-7	N.D.		1	0.5	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		5	2	1
04678	Fluoranthene	206-44-0	0.2	J	0.5	0.1	1
04678	Fluorene	86-73-7	2		0.5	0.1	1
04678	Hexachlorobenzene	118-74-1	N.D.		0.5	0.1	1
04678	Hexachlorobutadiene	87-68-3	N.D.		1	0.5	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.		15	5	1
04678	Hexachloroethane	67-72-1	N.D.		5	1	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.5	0.1	1
04678	Isophorone	78-59-1	N.D.		1	0.5	1
04678	Naphthalene	91-20-3	N.D.		0.5	0.1	1
04678	Nitrobenzene	98-95-3	N.D.		1	0.5	1
04678	2-Nitrophenol	88-75-5	N.D.		1	0.5	1
04678	4-Nitrophenol	100-02-7	N.D.		30	10	1
04678	N-Nitrosodimethylamine	62-75-9	N.D.		5	2	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.		1	0.5	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.		1	0.5	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04678	Di-n-octylphthalate	117-84-0	N.D.		5	2	1
04678	Pentachlorophenol	87-86-5	N.D.		5	1	1
04678	Phenanthrene	85-01-8	0.3	J	0.5	0.1	1
04678	Phenol	108-95-2	N.D.		1	0.5	1
04678	Pyrene	129-00-0	1		0.5	0.1	1
04678	1,2,4-Trichlorobenzene	120-82-1	N.D.		1	0.5	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.		1	0.5	1
Pesticides/PCBs	**SW-846 8081A**		**ug/l**		**ug/l**	**ug/l**	
00177	Aldrin	309-00-2	N.D.		0.0082	0.0016	1

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW184-062916-MM-018 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455698
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 17:00 by MM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4408 SDG#: MHF44-08

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081A**		**ug/l**	**ug/l**	**ug/l**	
00177	Alpha BHC	319-84-6	N.D.	0.0082	0.0024	1
00177	Beta BHC	319-85-7	0.0098 P	0.0082	0.0028	1
00177	Gamma BHC - Lindane	58-89-9	N.D.	0.0082	0.0016	1
00177	Chlordane	57-74-9	N.D.	0.41	0.13	1
00177	p,p-DDD	72-54-8	N.D.	0.016	0.0041	1
00177	p,p-DDE	72-55-9	N.D.	0.016	0.0041	1
00177	p,p-DDT	50-29-3	N.D.	0.016	0.0042	1
00177	Delta BHC	319-86-8	N.D.	0.0082	0.0028	1
00177	Dieldrin	60-57-1	N.D.	0.016	0.0043	1
00177	Endosulfan I	959-98-8	N.D.	0.0082	0.0035	1
00177	Endosulfan II	33213-65-9	N.D.	0.024	0.012	1
00177	Endosulfan Sulfate	1031-07-8	N.D.	0.016	0.0047	1
00177	Endrin	72-20-8	N.D.	0.016	0.0066	1
00177	Endrin Aldehyde	7421-93-4	N.D.	0.082	0.016	1
00177	Heptachlor	76-44-8	0.0037 J	0.0082	0.0016	1
00177	Heptachlor Epoxide	1024-57-3	N.D. V	0.0082	0.0025	1
00177	Methoxychlor	72-43-5	N.D.	0.082	0.024	1
00177	Toxaphene	8001-35-2	N.D.	0.82	0.24	1
Reporting limits were raised due to interference from the sample matrix.						
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07044	Antimony	7440-36-0	N.D.	20.0	7.7	1
07035	Arsenic	7440-38-2	72.6	20.0	9.7	1
07047	Beryllium	7440-41-7	N.D.	5.0	0.67	1
07049	Cadmium	7440-43-9	N.D.	5.0	0.49	1
07051	Chromium	7440-47-3	2.0 J	15.0	1.8	1
07052	Cobalt	7440-48-4	N.D.	5.0	1.9	1
07053	Copper	7440-50-8	N.D.	10.0	4.1	1
07055	Lead	7439-92-1	9.8 J	15.0	6.2	1
07061	Nickel	7440-02-0	N.D.	10.0	2.8	1
07036	Selenium	7782-49-2	N.D.	20.0	9.7	1
07066	Silver	7440-22-4	N.D.	5.0	1.9	1
07022	Thallium	7440-28-0	N.D.	30.0	9.4	1
07072	Zinc	7440-66-6	6.3 J	20.0	5.4	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.20	0.050	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.
Because the site straddles the PA/DE line, the Pennsylvania Certification comment has been added to all samples submitted from the site.
This sample was field filtered for dissolved metals.

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

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW184-062916-MM-018 Grab Groundwater Marcus Hook Facility AOI7

LL Sample # WW 8455698
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 17:00 by MM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4408 SDG#: MHF44-08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10335	Modified PPL VOCs 8260	SW-846 8260B	1	W161872AA	07/06/2016	06:10	Kevin Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W161872AA	07/06/2016	06:10	Kevin Kelly	1
04678	TCL SW846 8270C Water	SW-846 8270C	1	16184WAH026	07/07/2016	15:29	Holly B Ziegler	1
00813	BNA Water Extraction	SW-846 3510C	1	16184WAH026	07/05/2016	09:00	Kate E Lutte	1
00177	PPL Pesticides	SW-846 8081A	1	161840011A	07/12/2016	09:56	Lisa A Reinert	1
11118	Pesticide Screen Waters Ext	SW-846 3510C	1	161840011A	07/05/2016	02:15	Sherry L Morrow	1
07044	Antimony	SW-846 6010B	1	161871848008	07/12/2016	17:31	Cindy M Gehman	1
07035	Arsenic	SW-846 6010B	1	161871848008	07/12/2016	17:31	Cindy M Gehman	1
07047	Beryllium	SW-846 6010B	1	161871848008	07/12/2016	17:31	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	161871848008	07/12/2016	17:31	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	161871848008	07/12/2016	17:31	Cindy M Gehman	1
07052	Cobalt	SW-846 6010B	1	161871848008	07/12/2016	17:31	Cindy M Gehman	1
07053	Copper	SW-846 6010B	1	161871848008	07/12/2016	17:31	Cindy M Gehman	1
07055	Lead	SW-846 6010B	1	161871848008	07/14/2016	00:53	Matthew R Machtinger	1
07061	Nickel	SW-846 6010B	1	161871848008	07/12/2016	17:31	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	161871848008	07/14/2016	10:45	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	161871848008	07/12/2016	17:31	Cindy M Gehman	1
07022	Thallium	SW-846 6010B	1	161871848008	07/12/2016	17:31	Cindy M Gehman	1
07072	Zinc	SW-846 6010B	1	161871848008	07/12/2016	17:31	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	161875713010	07/13/2016	00:35	Parker D Lindstrom	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161871848008	07/11/2016	06:15	Lisa J Cooke	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161875713010	07/11/2016	08:25	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW182-062916-MM-017 Grab Groundwater Marcus Hook Facility AOI7

LL Sample # WW 8455699
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 16:10 by MM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4409 SDG#: MHF44-09

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10335	Acrolein	107-02-8	N.D.	2,000	800	20
10335	Acrylonitrile	107-13-1	N.D.	400	80	20
10335	Benzene	71-43-2	N.D.	20	10	20
10335	Bromodichloromethane	75-27-4	N.D.	20	10	20
10335	Bromoform	75-25-2	N.D.	80	10	20
10335	Bromomethane	74-83-9	N.D.	20	10	20
10335	Carbon Tetrachloride	56-23-5	N.D.	20	10	20
10335	Chlorobenzene	108-90-7	N.D.	20	10	20
10335	Chloroethane	75-00-3	N.D.	20	10	20
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	200	40	20
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.					
10335	Chloroform	67-66-3	N.D.	20	10	20
10335	Chloromethane	74-87-3	N.D.	20	10	20
10335	Dibromochloromethane	124-48-1	N.D.	20	10	20
10335	1,1-Dichloroethane	75-34-3	N.D.	20	10	20
10335	1,2-Dichloroethane	107-06-2	N.D.	20	10	20
10335	1,1-Dichloroethene	75-35-4	N.D.	20	10	20
10335	1,2-Dichloroethene (Total)	540-59-0	N.D.	20	10	20
10335	1,2-Dichloropropane	78-87-5	N.D.	20	10	20
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	20	10	20
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	20	10	20
10335	Ethylbenzene	100-41-4	N.D.	20	10	20
10335	Methylene Chloride	75-09-2	N.D.	80	40	20
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	20	10	20
10335	Tetrachloroethene	127-18-4	N.D.	20	10	20
10335	Toluene	108-88-3	N.D.	20	10	20
10335	1,1,1-Trichloroethane	71-55-6	N.D.	20	10	20
10335	1,1,2-Trichloroethane	79-00-5	N.D.	20	10	20
10335	Trichloroethene	79-01-6	N.D.	20	10	20
10335	Vinyl Chloride	75-01-4	N.D.	20	10	20

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC/DoD Standards. The following analytes are accepted based on this allowance: bromoform.

Reporting limits were raised due to sample foaming.

GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
04678	Acenaphthene	83-32-9	0.2 J	0.5	0.1	1
04678	Acenaphthylene	208-96-8	N.D.	0.5	0.1	1
04678	Anthracene	120-12-7	N.D.	0.5	0.1	1
04678	Benzidine	92-87-5	N.D.	60	20	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.5	0.1	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.5	0.1	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.5	0.1	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.5	0.1	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.5	0.1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	1	0.5	1
04678	Butylbenzylphthalate	85-68-7	N.D.	5	2	1
04678	Di-n-butylphthalate	84-74-2	N.D.	5	2	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW182-062916-MM-017 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455699
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 16:10 by MM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4409 SDG#: MHF44-09

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l		ug/l	ug/l	
04678	4-Chloro-3-methylphenol	59-50-7	N.D.		1	0.5	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.		1	0.5	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.		1	0.5	1
04678	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.		1	0.5	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
04678	2-Chloronaphthalene	91-58-7	N.D.		1	0.4	1
04678	2-Chlorophenol	95-57-8	N.D.		1	0.5	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.		1	0.5	1
04678	Chrysene	218-01-9	N.D.		0.5	0.1	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.		0.5	0.1	1
04678	1,2-Dichlorobenzene	95-50-1	N.D.		1	0.5	1
04678	1,3-Dichlorobenzene	541-73-1	N.D.		1	0.5	1
04678	1,4-Dichlorobenzene	106-46-7	N.D.		1	0.5	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.		5	2	1
04678	2,4-Dichlorophenol	120-83-2	0.6	J	1	0.5	1
04678	Diethylphthalate	84-66-2	N.D.		5	2	1
04678	2,4-Dimethylphenol	105-67-9	N.D.		1	0.5	1
04678	Dimethylphthalate	131-11-3	N.D.		5	2	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.		15	5	1
04678	2,4-Dinitrophenol	51-28-5	N.D.		30	10	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.		5	1	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.		1	0.5	1
04678	1,2-Diphenylhydrazine	122-66-7	N.D.		1	0.5	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		5	2	1
04678	Fluoranthene	206-44-0	0.2	J	0.5	0.1	1
04678	Fluorene	86-73-7	0.2	J	0.5	0.1	1
04678	Hexachlorobenzene	118-74-1	N.D.		0.5	0.1	1
04678	Hexachlorobutadiene	87-68-3	N.D.		1	0.5	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.		15	5	1
04678	Hexachloroethane	67-72-1	N.D.		5	1	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.5	0.1	1
04678	Isophorone	78-59-1	N.D.		1	0.5	1
04678	Naphthalene	91-20-3	N.D.		0.5	0.1	1
04678	Nitrobenzene	98-95-3	N.D.		1	0.5	1
04678	2-Nitrophenol	88-75-5	N.D.		1	0.5	1
04678	4-Nitrophenol	100-02-7	N.D.		30	10	1
04678	N-Nitrosodimethylamine	62-75-9	N.D.		5	2	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.		1	0.5	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.		1	0.5	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04678	Di-n-octylphthalate	117-84-0	N.D.		5	2	1
04678	Pentachlorophenol	87-86-5	N.D.		5	1	1
04678	Phenanthrene	85-01-8	N.D.		0.5	0.1	1
04678	Phenol	108-95-2	N.D.		1	0.5	1
04678	Pyrene	129-00-0	0.7		0.5	0.1	1
04678	1,2,4-Trichlorobenzene	120-82-1	N.D.		1	0.5	1

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW182-062916-MM-017 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455699
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 16:10 by MM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4409 SDG#: MHF44-09

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	1	0.5	1
Pesticides/PCBs	**SW-846 8081A**		**ug/l**	**ug/l**	**ug/l**	
00177	Aldrin	309-00-2	N.D.	0.0079	0.0016	1
00177	Alpha BHC	319-84-6	N.D.	0.0079	0.0024	1
00177	Beta BHC	319-85-7	0.0083	0.0079	0.0027	1
00177	Gamma BHC - Lindane	58-89-9	N.D.	0.0079	0.0016	1
00177	Chlordane	57-74-9	N.D.	0.40	0.13	1
00177	p,p-DDD	72-54-8	0.0043 J	0.016	0.0040	1
00177	p,p-DDE	72-55-9	N.D.	0.016	0.0040	1
00177	p,p-DDT	50-29-3	N.D.	0.016	0.0041	1
00177	Delta BHC	319-86-8	N.D.	0.0079	0.0027	1
00177	Dieldrin	60-57-1	N.D.	0.016	0.0042	1
00177	Endosulfan I	959-98-8	N.D.	0.0079	0.0034	1
00177	Endosulfan II	33213-65-9	N.D.	0.024	0.012	1
00177	Endosulfan Sulfate	1031-07-8	N.D.	0.016	0.0046	1
00177	Endrin	72-20-8	N.D.	0.016	0.0064	1
00177	Endrin Aldehyde	7421-93-4	N.D.	0.079	0.016	1
00177	Heptachlor	76-44-8	N.D.	0.0079	0.0016	1
00177	Heptachlor Epoxide	1024-57-3	N.D.	0.0079	0.0018	1
00177	Methoxychlor	72-43-5	N.D.	0.079	0.024	1
00177	Toxaphene	8001-35-2	N.D.	0.79	0.24	1
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07044	Antimony	7440-36-0	N.D.	20.0	7.7	1
07035	Arsenic	7440-38-2	11.4 J	20.0	9.7	1
07047	Beryllium	7440-41-7	N.D.	5.0	0.67	1
07049	Cadmium	7440-43-9	N.D.	5.0	0.49	1
07051	Chromium	7440-47-3	2.7 J	15.0	1.8	1
07052	Cobalt	7440-48-4	N.D.	5.0	1.9	1
07053	Copper	7440-50-8	12.5	10.0	4.1	1
07055	Lead	7439-92-1	33.5	15.0	6.2	1
07061	Nickel	7440-02-0	N.D.	10.0	2.8	1
07036	Selenium	7782-49-2	N.D.	20.0	9.7	1
07066	Silver	7440-22-4	N.D.	5.0	1.9	1
07022	Thallium	7440-28-0	N.D.	30.0	9.4	1
07072	Zinc	7440-66-6	52.6	20.0	5.4	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.20	0.050	1

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW182-062916-MM-017 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455699
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 16:10 by MM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4409 SDG#: MHF44-09

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.
Because the site straddles the PA/DE line, the Pennsylvania Certification comment has been added to all samples submitted from the site.
This sample was field filtered for dissolved metals.

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	Modified PPL VOCs 8260	SW-846 8260B	1	W161892AA	07/08/2016	04:30	Kevin Kelly	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W161892AA	07/08/2016	04:30	Kevin Kelly	20
04678	TCL SW846 8270C Water	SW-846 8270C	1	16184WAH026	07/07/2016	15:58	Holly B Ziegler	1
00813	BNA Water Extraction	SW-846 3510C	1	16184WAH026	07/05/2016	09:00	Kate E Lutte	1
00177	PPL Pesticides	SW-846 8081A	1	161840011A	07/12/2016	10:10	Lisa A Reinert	1
11118	Pesticide Screen Waters Ext	SW-846 3510C	1	161840011A	07/05/2016	02:15	Sherry L Morrow	1
07044	Antimony	SW-846 6010B	1	161871848008	07/12/2016	17:40	Cindy M Gehman	1
07035	Arsenic	SW-846 6010B	1	161871848008	07/12/2016	17:40	Cindy M Gehman	1
07047	Beryllium	SW-846 6010B	1	161871848008	07/12/2016	17:40	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	161871848008	07/12/2016	17:40	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	161871848008	07/12/2016	17:40	Cindy M Gehman	1
07052	Cobalt	SW-846 6010B	1	161871848008	07/12/2016	17:40	Cindy M Gehman	1
07053	Copper	SW-846 6010B	1	161871848008	07/12/2016	17:40	Cindy M Gehman	1
07055	Lead	SW-846 6010B	1	161871848008	07/14/2016	01:00	Matthew R Machtinger	1
07061	Nickel	SW-846 6010B	1	161871848008	07/12/2016	17:40	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	161871848008	07/14/2016	10:56	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	161871848008	07/12/2016	17:40	Cindy M Gehman	1
07022	Thallium	SW-846 6010B	1	161871848008	07/12/2016	17:40	Cindy M Gehman	1
07072	Zinc	SW-846 6010B	1	161871848008	07/12/2016	17:40	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	161875713010	07/13/2016	00:37	Parker D Lindstrom	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161871848008	07/11/2016	06:15	Lisa J Cooke	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161875713010	07/11/2016	08:25	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW187-062916-RM-019 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455700
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 17:45 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4410 SDG#: MHF44-10

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	**ug/l**	
10335	Acrolein	107-02-8	N.D.		100	40	1
10335	Acrylonitrile	107-13-1	N.D.		20	4	1
10335	Benzene	71-43-2	N.D.		1	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.		1	0.5	1
10335	Bromoform	75-25-2	N.D.		4	0.5	1
10335	Bromomethane	74-83-9	N.D.		1	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.		1	0.5	1
10335	Chlorobenzene	108-90-7	N.D.		1	0.5	1
10335	Chloroethane	75-00-3	N.D.		1	0.5	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.		10	2	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.						
10335	Chloroform	67-66-3	N.D.		1	0.5	1
10335	Chloromethane	74-87-3	N.D.		1	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.		1	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.		1	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.		1	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.		1	0.5	1
10335	1,2-Dichloroethene (Total)	540-59-0	N.D.		1	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.		1	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		1	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		1	0.5	1
10335	Ethylbenzene	100-41-4	N.D.		1	0.5	1
10335	Methylene Chloride	75-09-2	N.D.		4	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.		1	0.5	1
10335	Toluene	108-88-3	N.D.		1	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.		1	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.		1	0.5	1
10335	Trichloroethene	79-01-6	N.D.		1	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.		1	0.5	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	
04678	Acenaphthene	83-32-9	1		0.5	0.1	1
04678	Acenaphthylene	208-96-8	N.D.		0.5	0.1	1
04678	Anthracene	120-12-7	N.D.		0.5	0.1	1
04678	Benzidine	92-87-5	N.D.		60	20	1
04678	Benzo(a)anthracene	56-55-3	N.D.		0.5	0.1	1
04678	Benzo(a)pyrene	50-32-8	0.3	J	0.5	0.1	1
04678	Benzo(b)fluoranthene	205-99-2	0.2	J	0.5	0.1	1
04678	Benzo(g,h,i)perylene	191-24-2	0.3	J	0.5	0.1	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.		0.5	0.1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.		1	0.5	1
04678	Butylbenzylphthalate	85-68-7	N.D.		5	2	1
04678	Di-n-butylphthalate	84-74-2	N.D.		5	2	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.		1	0.5	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.		1	0.5	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.		1	0.5	1
04678	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.		1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW187-062916-RM-019 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455700
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 17:45 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4410 SDG#: MHF44-10

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	2-Chloronaphthalene	91-58-7	N.D.	1	0.4	1
04678	2-Chlorophenol	95-57-8	N.D.	1	0.5	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	1	0.5	1
04678	Chrysene	218-01-9	N.D.	0.5	0.1	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.5	0.1	1
04678	1,2-Dichlorobenzene	95-50-1	N.D.	1	0.5	1
04678	1,3-Dichlorobenzene	541-73-1	N.D.	1	0.5	1
04678	1,4-Dichlorobenzene	106-46-7	N.D.	1	0.5	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	5	2	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	1	0.5	1
04678	Diethylphthalate	84-66-2	N.D.	5	2	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	1	0.5	1
04678	Dimethylphthalate	131-11-3	N.D.	5	2	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	15	5	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	30	10	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	5	1	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	1	0.5	1
04678	1,2-Diphenylhydrazine	122-66-7	N.D.	1	0.5	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	2	1
04678	Fluoranthene	206-44-0	N.D.	0.5	0.1	1
04678	Fluorene	86-73-7	N.D.	0.5	0.1	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.5	0.1	1
04678	Hexachlorobutadiene	87-68-3	N.D.	1	0.5	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	15	5	1
04678	Hexachloroethane	67-72-1	N.D.	5	1	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.5	0.1	1
04678	Isophorone	78-59-1	N.D.	1	0.5	1
04678	Naphthalene	91-20-3	N.D.	0.5	0.1	1
04678	Nitrobenzene	98-95-3	N.D.	1	0.5	1
04678	2-Nitrophenol	88-75-5	N.D.	1	0.5	1
04678	4-Nitrophenol	100-02-7	N.D.	30	10	1
04678	N-Nitrosodimethylamine	62-75-9	N.D.	5	2	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	1	0.5	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	1	0.5	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	5	2	1
04678	Pentachlorophenol	87-86-5	N.D.	5	1	1
04678	Phenanthrene	85-01-8	N.D.	0.5	0.1	1
04678	Phenol	108-95-2	N.D.	1	0.5	1
04678	Pyrene	129-00-0	1	0.5	0.1	1
04678	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	0.5	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	1	0.5	1
Pesticides/PCBs	**SW-846 8081A**		**ug/l**	**ug/l**	**ug/l**	
00177	Aldrin	309-00-2	N.D.	0.0081	0.0016	1

*=This limit was used in the evaluation of the final result

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW187-062916-RM-019 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455700
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 17:45 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4410 SDG#: MHF44-10

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081A**		**ug/l**	**ug/l**	**ug/l**	
00177	Alpha BHC	319-84-6	N.D.	0.0081	0.0024	1
00177	Beta BHC	319-85-7	0.030	0.0081	0.0028	1
00177	Gamma BHC - Lindane	58-89-9	N.D.	0.0081	0.0016	1
00177	Chlordane	57-74-9	N.D.	0.41	0.13	1
00177	p,p-DDD	72-54-8	0.031 P	0.016	0.0041	1
00177	p,p-DDE	72-55-9	N.D.	0.016	0.0041	1
00177	p,p-DDT	50-29-3	N.D.	0.016	0.0042	1
00177	Delta BHC	319-86-8	N.D.	0.0081	0.0028	1
00177	Dieldrin	60-57-1	0.0058 JP	0.016	0.0043	1
00177	Endosulfan I	959-98-8	0.0087 P	0.0081	0.0035	1
00177	Endosulfan II	33213-65-9	N.D.	0.024	0.012	1
00177	Endosulfan Sulfate	1031-07-8	N.D.	0.016	0.0047	1
00177	Endrin	72-20-8	N.D.	0.016	0.0066	1
00177	Endrin Aldehyde	7421-93-4	N.D.	0.081	0.016	1
00177	Heptachlor	76-44-8	0.0079 J	0.0081	0.0016	1
00177	Heptachlor Epoxide	1024-57-3	0.015	0.0081	0.0019	1
00177	Methoxychlor	72-43-5	N.D.	0.081	0.024	1
00177	Toxaphene	8001-35-2	N.D.	0.81	0.24	1
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07044	Antimony	7440-36-0	N.D.	20.0	7.7	1
07035	Arsenic	7440-38-2	N.D.	20.0	9.7	1
07047	Beryllium	7440-41-7	N.D.	5.0	0.67	1
07049	Cadmium	7440-43-9	N.D.	5.0	0.49	1
07051	Chromium	7440-47-3	3.0 J	15.0	1.8	1
07052	Cobalt	7440-48-4	N.D.	5.0	1.9	1
07053	Copper	7440-50-8	N.D.	10.0	4.1	1
07055	Lead	7439-92-1	7.0 J	15.0	6.2	1
07061	Nickel	7440-02-0	N.D.	10.0	2.8	1
07036	Selenium	7782-49-2	N.D.	20.0	9.7	1
07066	Silver	7440-22-4	N.D.	5.0	1.9	1
07022	Thallium	7440-28-0	N.D.	30.0	9.4	1
07072	Zinc	7440-66-6	N.D.	20.0	5.4	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.20	0.050	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.
Because the site straddles the PA/DE line, the Pennsylvania Certification comment has been added to all samples submitted from the site.
This sample was field filtered for dissolved metals.

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

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW187-062916-RM-019 Grab Groundwater Marcus Hook Facility AOI7

LL Sample # WW 8455700
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 17:45 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4410 SDG#: MHF44-10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	Modified PPL VOCs 8260	SW-846 8260B	1	W161891AA	07/07/2016 14:50	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W161891AA	07/07/2016 14:50	Nicole S Lamoreaux	1
04678	TCL SW846 8270C Water	SW-846 8270C	1	16184WAH026	07/07/2016 16:26	Holly B Ziegler	1
00813	BNA Water Extraction	SW-846 3510C	1	16184WAH026	07/05/2016 09:00	Kate E Lutte	1
00177	PPL Pesticides	SW-846 8081A	1	161840011A	07/12/2016 10:24	Lisa A Reinert	1
11118	Pesticide Screen Waters Ext	SW-846 3510C	1	161840011A	07/05/2016 02:15	Sherry L Morrow	1
07044	Antimony	SW-846 6010B	1	161871848008	07/12/2016 17:44	Cindy M Gehman	1
07035	Arsenic	SW-846 6010B	1	161871848008	07/12/2016 17:44	Cindy M Gehman	1
07047	Beryllium	SW-846 6010B	1	161871848008	07/12/2016 17:44	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	161871848008	07/12/2016 17:44	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	161871848008	07/12/2016 17:44	Cindy M Gehman	1
07052	Cobalt	SW-846 6010B	1	161871848008	07/12/2016 17:44	Cindy M Gehman	1
07053	Copper	SW-846 6010B	1	161871848008	07/12/2016 17:44	Cindy M Gehman	1
07055	Lead	SW-846 6010B	1	161871848008	07/14/2016 01:03	Matthew R Machtinger	1
07061	Nickel	SW-846 6010B	1	161871848008	07/12/2016 17:44	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	161871848008	07/14/2016 10:59	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	161871848008	07/12/2016 17:44	Cindy M Gehman	1
07022	Thallium	SW-846 6010B	1	161871848008	07/12/2016 17:44	Cindy M Gehman	1
07072	Zinc	SW-846 6010B	1	161871848008	07/12/2016 17:44	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	161875713010	07/13/2016 00:39	Parker D Lindstrom	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161871848008	07/11/2016 06:15	Lisa J Cooke	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161875713010	07/11/2016 08:25	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW277-062916-RM-020 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455701
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 18:15 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4411 SDG#: MHF44-11

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10335	Acrolein	107-02-8	N.D.	100	40	1
10335	Acrylonitrile	107-13-1	N.D.	20	4	1
10335	Benzene	71-43-2	N.D.	1	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	0.5	1
10335	Bromoform	75-25-2	N.D.	4	0.5	1
10335	Bromomethane	74-83-9	N.D.	1	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	1	0.5	1
10335	Chloroethane	75-00-3	N.D.	1	0.5	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	10	2	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.					
10335	Chloroform	67-66-3	N.D.	1	0.5	1
10335	Chloromethane	74-87-3	N.D.	1	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.	1	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	1	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	1	0.5	1
10335	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.5	1
10335	Ethylbenzene	100-41-4	110	1	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	4	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	1	0.5	1
10335	Toluene	108-88-3	3	1	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.5	1
10335	Trichloroethene	79-01-6	N.D.	1	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.	1	0.5	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
04678	Acenaphthene	83-32-9	3	0.5	0.1	1
04678	Acenaphthylene	208-96-8	N.D.	0.5	0.1	1
04678	Anthracene	120-12-7	0.5	0.5	0.1	1
04678	Benzidine	92-87-5	N.D.	60	20	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.5	0.1	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.5	0.1	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.5	0.1	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.5	0.1	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.5	0.1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	1	0.5	1
04678	Butylbenzylphthalate	85-68-7	N.D.	5	2	1
04678	Di-n-butylphthalate	84-74-2	N.D.	5	2	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	1	0.5	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	1	0.5	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	1	0.5	1
04678	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW277-062916-RM-020 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455701
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 18:15 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4411 SDG#: MHF44-11

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	2-Chloronaphthalene	91-58-7	N.D.	1	0.4	1
04678	2-Chlorophenol	95-57-8	N.D.	1	0.5	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	1	0.5	1
04678	Chrysene	218-01-9	N.D.	0.5	0.1	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.5	0.1	1
04678	1,2-Dichlorobenzene	95-50-1	N.D.	1	0.5	1
04678	1,3-Dichlorobenzene	541-73-1	N.D.	1	0.5	1
04678	1,4-Dichlorobenzene	106-46-7	N.D.	1	0.5	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	5	2	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	1	0.5	1
04678	Diethylphthalate	84-66-2	N.D.	5	2	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	1	0.5	1
04678	Dimethylphthalate	131-11-3	N.D.	5	2	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	15	5	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	30	10	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	5	1	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	1	0.5	1
04678	1,2-Diphenylhydrazine	122-66-7	N.D.	1	0.5	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	2	1
04678	Fluoranthene	206-44-0	N.D.	0.5	0.1	1
04678	Fluorene	86-73-7	3	0.5	0.1	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.5	0.1	1
04678	Hexachlorobutadiene	87-68-3	N.D.	1	0.5	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	15	5	1
04678	Hexachloroethane	67-72-1	N.D.	5	1	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.5	0.1	1
04678	Isophorone	78-59-1	N.D.	1	0.5	1
04678	Naphthalene	91-20-3	24	0.5	0.1	1
04678	Nitrobenzene	98-95-3	N.D.	1	0.5	1
04678	2-Nitrophenol	88-75-5	N.D.	1	0.5	1
04678	4-Nitrophenol	100-02-7	N.D.	30	10	1
04678	N-Nitrosodimethylamine	62-75-9	N.D.	5	2	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	1	0.5	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	1	0.5	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	5	2	1
04678	Pentachlorophenol	87-86-5	N.D.	5	1	1
04678	Phenanthrene	85-01-8	2	0.5	0.1	1
04678	Phenol	108-95-2	N.D.	1	0.5	1
04678	Pyrene	129-00-0	0.7	0.5	0.1	1
04678	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	0.5	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	1	0.5	1
Pesticides/PCBs	**SW-846 8081A**		**ug/l**	**ug/l**	**ug/l**	
00177	Aldrin	309-00-2	0.0042 JP	0.0081	0.0016	1

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW277-062916-RM-020 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455701
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 18:15 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4411 SDG#: MHF44-11

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081A**		**ug/l**	**ug/l**	**ug/l**	
00177	Alpha BHC	319-84-6	N.D.	0.0081	0.0024	1
00177	Beta BHC	319-85-7	N.D. V	0.0081	0.0072	1
00177	Gamma BHC - Lindane	58-89-9	N.D.	0.0081	0.0016	1
00177	Chlordane	57-74-9	N.D.	0.40	0.13	1
00177	p,p-DDD	72-54-8	0.0053 JP	0.016	0.0040	1
00177	p,p-DDE	72-55-9	N.D.	0.016	0.0040	1
00177	p,p-DDT	50-29-3	N.D.	0.016	0.0042	1
00177	Delta BHC	319-86-8	N.D.	0.0081	0.0028	1
00177	Dieldrin	60-57-1	0.0071 J	0.016	0.0043	1
00177	Endosulfan I	959-98-8	N.D.	0.0081	0.0035	1
00177	Endosulfan II	33213-65-9	N.D.	0.024	0.012	1
00177	Endosulfan Sulfate	1031-07-8	N.D.	0.016	0.0047	1
00177	Endrin	72-20-8	N.D.	0.016	0.0066	1
00177	Endrin Aldehyde	7421-93-4	N.D.	0.081	0.016	1
00177	Heptachlor	76-44-8	0.0049 JP	0.0081	0.0016	1
00177	Heptachlor Epoxide	1024-57-3	0.0020 J	0.0081	0.0019	1
00177	Methoxychlor	72-43-5	N.D.	0.081	0.024	1
00177	Toxaphene	8001-35-2	N.D.	0.81	0.24	1
Reporting limits were raised due to interference from the sample matrix.						
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07044	Antimony	7440-36-0	N.D.	20.0	7.7	1
07035	Arsenic	7440-38-2	N.D.	20.0	9.7	1
07047	Beryllium	7440-41-7	N.D.	5.0	0.67	1
07049	Cadmium	7440-43-9	N.D.	5.0	0.49	1
07051	Chromium	7440-47-3	2.9 J	15.0	1.8	1
07052	Cobalt	7440-48-4	N.D.	5.0	1.9	1
07053	Copper	7440-50-8	N.D.	10.0	4.1	1
07055	Lead	7439-92-1	N.D.	15.0	6.2	1
07061	Nickel	7440-02-0	N.D.	10.0	2.8	1
07036	Selenium	7782-49-2	N.D.	20.0	9.7	1
07066	Silver	7440-22-4	N.D.	5.0	1.9	1
07022	Thallium	7440-28-0	N.D.	30.0	9.4	1
07072	Zinc	7440-66-6	N.D.	20.0	5.4	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.20	0.050	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.
Because the site straddles the PA/DE line, the Pennsylvania Certification comment has been added to all samples submitted from the site.
This sample was field filtered for dissolved metals.

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

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW277-062916-RM-020 Grab Groundwater Marcus Hook Facility AOI7

LL Sample # WW 8455701
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 18:15 by RM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4411 SDG#: MHF44-11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10335	Modified PPL VOCs 8260	SW-846 8260B	1	W161891AA	07/07/2016	16:02	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W161891AA	07/07/2016	16:02	Nicole S Lamoreaux	1
04678	TCL SW846 8270C Water	SW-846 8270C	1	16184WAH026	07/07/2016	16:54	Holly B Ziegler	1
00813	BNA Water Extraction	SW-846 3510C	1	16184WAH026	07/05/2016	09:00	Kate E Lutte	1
00177	PPL Pesticides	SW-846 8081A	1	161840011A	07/12/2016	10:37	Lisa A Reinert	1
11118	Pesticide Screen Waters Ext	SW-846 3510C	1	161840011A	07/05/2016	02:15	Sherry L Morrow	1
07044	Antimony	SW-846 6010B	1	161871848008	07/12/2016	17:47	Cindy M Gehman	1
07035	Arsenic	SW-846 6010B	1	161871848008	07/12/2016	17:47	Cindy M Gehman	1
07047	Beryllium	SW-846 6010B	1	161871848008	07/12/2016	17:47	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	161871848008	07/12/2016	17:47	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	161871848008	07/12/2016	17:47	Cindy M Gehman	1
07052	Cobalt	SW-846 6010B	1	161871848008	07/12/2016	17:47	Cindy M Gehman	1
07053	Copper	SW-846 6010B	1	161871848008	07/12/2016	17:47	Cindy M Gehman	1
07055	Lead	SW-846 6010B	1	161871848008	07/14/2016	01:07	Matthew R Machtinger	1
07061	Nickel	SW-846 6010B	1	161871848008	07/12/2016	17:47	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	161871848008	07/14/2016	11:03	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	161871848008	07/12/2016	17:47	Cindy M Gehman	1
07022	Thallium	SW-846 6010B	1	161871848008	07/12/2016	17:47	Cindy M Gehman	1
07072	Zinc	SW-846 6010B	1	161871848008	07/12/2016	17:47	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	161875713010	07/13/2016	00:45	Parker D Lindstrom	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161871848008	07/11/2016	06:15	Lisa J Cooke	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161875713010	07/11/2016	08:25	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW132-062916-MM-021 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455702
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 18:45 by MM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4412 SDG#: MHF44-12

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10335	Acrolein	107-02-8	N.D.	100	40	1
10335	Acrylonitrile	107-13-1	N.D.	20	4	1
10335	Benzene	71-43-2	N.D.	1	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	0.5	1
10335	Bromoform	75-25-2	N.D.	4	0.5	1
10335	Bromomethane	74-83-9	N.D.	1	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	1	0.5	1
10335	Chloroethane	75-00-3	N.D.	1	0.5	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	10	2	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.					
10335	Chloroform	67-66-3	N.D.	1	0.5	1
10335	Chloromethane	74-87-3	N.D.	1	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.	1	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	1	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	1	0.5	1
10335	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.5	1
10335	Ethylbenzene	100-41-4	N.D.	1	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	4	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	1	0.5	1
10335	Toluene	108-88-3	N.D.	1	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.5	1
10335	Trichloroethene	79-01-6	N.D.	1	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.	1	0.5	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
04678	Acenaphthene	83-32-9	1	0.5	0.1	1
04678	Acenaphthylene	208-96-8	N.D.	0.5	0.1	1
04678	Anthracene	120-12-7	1	0.5	0.1	1
04678	Benzidine	92-87-5	N.D.	60	20	1
04678	Benzo(a)anthracene	56-55-3	1	0.5	0.1	1
04678	Benzo(a)pyrene	50-32-8	2	0.5	0.1	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.5	0.1	1
04678	Benzo(g,h,i)perylene	191-24-2	0.5	0.5	0.1	1
04678	Benzo(k)fluoranthene	207-08-9	1	0.5	0.1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	1	0.5	1
04678	Butylbenzylphthalate	85-68-7	N.D.	5	2	1
04678	Di-n-butylphthalate	84-74-2	N.D.	5	2	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	1	0.5	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	1	0.5	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	1	0.5	1
04678	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: GW-11102641-MW132-062916-MM-021 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455702
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 18:45 by MM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4412 SDG#: MHF44-12

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
04678	2-Chloronaphthalene	91-58-7	N.D.		1	0.4	1
04678	2-Chlorophenol	95-57-8	N.D.		1	0.5	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.		1	0.5	1
04678	Chrysene	218-01-9	4		0.5	0.1	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.		0.5	0.1	1
04678	1,2-Dichlorobenzene	95-50-1	N.D.		1	0.5	1
04678	1,3-Dichlorobenzene	541-73-1	N.D.		1	0.5	1
04678	1,4-Dichlorobenzene	106-46-7	N.D.		1	0.5	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.		5	2	1
04678	2,4-Dichlorophenol	120-83-2	N.D.		1	0.5	1
04678	Diethylphthalate	84-66-2	N.D.		5	2	1
04678	2,4-Dimethylphenol	105-67-9	N.D.		1	0.5	1
04678	Dimethylphthalate	131-11-3	N.D.		5	2	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.		15	5	1
04678	2,4-Dinitrophenol	51-28-5	N.D.		30	10	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.		5	1	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.		1	0.5	1
04678	1,2-Diphenylhydrazine	122-66-7	N.D.		1	0.5	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	7		5	2	1
04678	Fluoranthene	206-44-0	2		0.5	0.1	1
04678	Fluorene	86-73-7	2		0.5	0.1	1
04678	Hexachlorobenzene	118-74-1	N.D.		0.5	0.1	1
04678	Hexachlorobutadiene	87-68-3	N.D.		1	0.5	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.		15	5	1
04678	Hexachloroethane	67-72-1	N.D.		5	1	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	0.2	J	0.5	0.1	1
04678	Isophorone	78-59-1	N.D.		1	0.5	1
04678	Naphthalene	91-20-3	N.D.		0.5	0.1	1
04678	Nitrobenzene	98-95-3	N.D.		1	0.5	1
04678	2-Nitrophenol	88-75-5	N.D.		1	0.5	1
04678	4-Nitrophenol	100-02-7	N.D.		30	10	1
04678	N-Nitrosodimethylamine	62-75-9	N.D.		5	2	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.		1	0.5	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.		1	0.5	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04678	Di-n-octylphthalate	117-84-0	N.D.		5	2	1
04678	Pentachlorophenol	87-86-5	N.D.		5	1	1
04678	Phenanthrene	85-01-8	N.D.		0.5	0.1	1
04678	Phenol	108-95-2	N.D.		1	0.5	1
04678	Pyrene	129-00-0	7		0.5	0.1	1
04678	1,2,4-Trichlorobenzene	120-82-1	N.D.		1	0.5	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.		1	0.5	1
Pesticides/PCBs	**SW-846 8081A**		**ug/l**		**ug/l**	**ug/l**	
00177	Aldrin	309-00-2	N.D.		0.0082	0.0016	1

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW132-062916-MM-021 Grab Groundwater Marcus Hook Facility AOI7

LL Sample # WW 8455702
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 18:45 by MM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4412 SDG#: MHF44-12

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Pesticides/PCBs	**SW-846 8081A**		**ug/l**	**ug/l**	**ug/l**	
00177	Alpha BHC	319-84-6	0.0050 JP	0.0082	0.0024	1
00177	Beta BHC	319-85-7	N.D. V	0.0082	0.0080	1
00177	Gamma BHC - Lindane	58-89-9	N.D.	0.0082	0.0016	1
00177	Chlordane	57-74-9	N.D.	0.41	0.13	1
00177	p,p-DDD	72-54-8	N.D.	0.016	0.0041	1
00177	p,p-DDE	72-55-9	N.D.	0.016	0.0041	1
00177	p,p-DDT	50-29-3	N.D.	0.016	0.0042	1
00177	Delta BHC	319-86-8	N.D.	0.0082	0.0028	1
00177	Dieldrin	60-57-1	N.D.	0.016	0.0043	1
00177	Endosulfan I	959-98-8	0.085	0.0082	0.0035	1
00177	Endosulfan II	33213-65-9	N.D.	0.024	0.012	1
00177	Endosulfan Sulfate	1031-07-8	N.D.	0.016	0.0047	1
00177	Endrin	72-20-8	N.D.	0.016	0.0066	1
00177	Endrin Aldehyde	7421-93-4	N.D.	0.082	0.016	1
00177	Heptachlor	76-44-8	N.D. V	0.0082	0.0028	1
00177	Heptachlor Epoxide	1024-57-3	0.0023 JP	0.0082	0.0019	1
00177	Methoxychlor	72-43-5	N.D.	0.082	0.024	1
00177	Toxaphene	8001-35-2	N.D.	0.82	0.24	1
Reporting limits were raised due to interference from the sample matrix.						
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07044	Antimony	7440-36-0	N.D.	20.0	7.7	1
07035	Arsenic	7440-38-2	N.D.	20.0	9.7	1
07047	Beryllium	7440-41-7	N.D.	5.0	0.67	1
07049	Cadmium	7440-43-9	N.D.	5.0	0.49	1
07051	Chromium	7440-47-3	2.2 J	15.0	1.8	1
07052	Cobalt	7440-48-4	N.D.	5.0	1.9	1
07053	Copper	7440-50-8	N.D.	10.0	4.1	1
07055	Lead	7439-92-1	N.D.	15.0	6.2	1
07061	Nickel	7440-02-0	N.D.	10.0	2.8	1
07036	Selenium	7782-49-2	N.D.	20.0	9.7	1
07066	Silver	7440-22-4	N.D.	5.0	1.9	1
07022	Thallium	7440-28-0	N.D.	30.0	9.4	1
07072	Zinc	7440-66-6	6.6 J	20.0	5.4	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.20	0.050	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.
Because the site straddles the PA/DE line, the Pennsylvania Certification comment has been added to all samples submitted from the site.
This sample was field filtered for dissolved metals.

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

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: GW-11102641-MW132-062916-MM-021 Grab Groundwater
Marcus Hook Facility AOI7

LL Sample # WW 8455702
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016 18:45 by MM

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4412 SDG#: MHF44-12

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10335	Modified PPL VOCs 8260	SW-846 8260B	1	W161891AA	07/07/2016	15:14	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W161891AA	07/07/2016	15:14	Nicole S Lamoreaux	1
04678	TCL SW846 8270C Water	SW-846 8270C	1	16184WAH026	07/07/2016	17:23	Holly B Ziegler	1
00813	BNA Water Extraction	SW-846 3510C	1	16184WAH026	07/05/2016	09:00	Kate E Lutte	1
00177	PPL Pesticides	SW-846 8081A	1	161840011A	07/12/2016	10:51	Lisa A Reinert	1
11118	Pesticide Screen Waters Ext	SW-846 3510C	1	161840011A	07/05/2016	02:15	Sherry L Morrow	1
07044	Antimony	SW-846 6010B	1	161871848008	07/12/2016	17:50	Cindy M Gehman	1
07035	Arsenic	SW-846 6010B	1	161871848008	07/12/2016	17:50	Cindy M Gehman	1
07047	Beryllium	SW-846 6010B	1	161871848008	07/12/2016	17:50	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	161871848008	07/12/2016	17:50	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	161871848008	07/12/2016	17:50	Cindy M Gehman	1
07052	Cobalt	SW-846 6010B	1	161871848008	07/12/2016	17:50	Cindy M Gehman	1
07053	Copper	SW-846 6010B	1	161871848008	07/12/2016	17:50	Cindy M Gehman	1
07055	Lead	SW-846 6010B	1	161871848008	07/14/2016	01:10	Matthew R Machtinger	1
07061	Nickel	SW-846 6010B	1	161871848008	07/12/2016	17:50	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	161871848008	07/14/2016	11:06	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	161871848008	07/12/2016	17:50	Cindy M Gehman	1
07022	Thallium	SW-846 6010B	1	161871848008	07/12/2016	17:50	Cindy M Gehman	1
07072	Zinc	SW-846 6010B	1	161871848008	07/12/2016	17:50	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	161875713010	07/13/2016	00:47	Parker D Lindstrom	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	161871848008	07/11/2016	06:15	Lisa J Cooke	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161875713010	07/11/2016	08:25	Lisa J Cooke	1

*=This limit was used in the evaluation of the final result

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: TB-11102641-062916-001 Water
Marcus Hook Facility AOI7

LL Sample # WW 8455703
LL Group # 1678000
Account # 10177

Project Name: Marcus Hook Facility AOI7

Collected: 06/29/2016

Submitted: 06/30/2016 16:45
Reported: 07/26/2016 15:09

Evergreen c/o GHD
2055 Niagara Falls Blvd.
Suite #3
Niagara Falls NY 14304

M4413 SDG#: MHF44-13TB

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10335	Acrolein	107-02-8	N.D.	100	40	1
10335	Acrylonitrile	107-13-1	N.D.	20	4	1
10335	Benzene	71-43-2	N.D.	1	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	0.5	1
10335	Bromoform	75-25-2	N.D.	4	0.5	1
10335	Bromomethane	74-83-9	N.D.	1	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	1	0.5	1
10335	Chloroethane	75-00-3	N.D.	1	0.5	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	10	2	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.					
10335	Chloroform	67-66-3	N.D.	1	0.5	1
10335	Chloromethane	74-87-3	N.D.	1	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.	1	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	1	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	1	0.5	1
10335	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.5	1
10335	Ethylbenzene	100-41-4	N.D.	1	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	4	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	1	0.5	1
10335	Toluene	108-88-3	N.D.	1	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.5	1
10335	Trichloroethene	79-01-6	N.D.	1	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.	1	0.5	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/17.
Because the site straddles the PA/DE line, the Pennsylvania Certification comment has been added to all samples submitted from the site.

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	Modified PPL VOCs 8260	SW-846 8260B	1	W161891AA	07/07/2016 15:38	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W161891AA	07/07/2016 15:38	Nicole S Lamoreaux	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Evergreen c/o GHD
Reported: 07/26/2016 15:09

Group Number: 1678000

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 ug/l	LOQ** ug/l	MDL ug/l
Batch number: W161872AA	Sample number(s): 8455691-8455698		
Acrolein	N.D.	100	40
Acrylonitrile	N.D.	20	4
Benzene	N.D.	1	0.5
Bromodichloromethane	N.D.	1	0.5
Bromoform	N.D.	4	0.5
Bromomethane	N.D.	1	0.5
Carbon Tetrachloride	N.D.	1	0.5
Chlorobenzene	N.D.	1	0.5
Chloroethane	N.D.	1	0.5
2-Chloroethyl Vinyl Ether	N.D.	10	2
Chloroform	N.D.	1	0.5
Chloromethane	N.D.	1	0.5
Dibromochloromethane	N.D.	1	0.5
1,1-Dichloroethane	N.D.	1	0.5
1,2-Dichloroethane	N.D.	1	0.5
1,1-Dichloroethene	N.D.	1	0.5
1,2-Dichloroethene (Total)	N.D.	1	0.5
1,2-Dichloropropane	N.D.	1	0.5
cis-1,3-Dichloropropene	N.D.	1	0.5
trans-1,3-Dichloropropene	N.D.	1	0.5
Ethylbenzene	N.D.	1	0.5
Methylene Chloride	N.D.	4	2
1,1,2,2-Tetrachloroethane	N.D.	1	0.5
Tetrachloroethene	N.D.	1	0.5
Toluene	N.D.	1	0.5
1,1,1-Trichloroethane	N.D.	1	0.5
1,1,2-Trichloroethane	N.D.	1	0.5
Trichloroethene	N.D.	1	0.5
Vinyl Chloride	N.D.	1	0.5
Batch number: W161891AA	Sample number(s): 8455700-8455703		
Acrolein	N.D.	100	40
Acrylonitrile	N.D.	20	4
Benzene	N.D.	1	0.5
Bromodichloromethane	N.D.	1	0.5
Bromoform	N.D.	4	0.5
Bromomethane	N.D.	1	0.5
Carbon Tetrachloride	N.D.	1	0.5
Chlorobenzene	N.D.	1	0.5
Chloroethane	N.D.	1	0.5
2-Chloroethyl Vinyl Ether	N.D.	10	2
Chloroform	N.D.	1	0.5
Chloromethane	N.D.	1	0.5

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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: Evergreen c/o GHD
Reported: 07/26/2016 15:09

Group Number: 1678000

Method Blank (continued)

Analysis Name	Result ug/l	LOQ** ug/l	MDL ug/l
Dibromochloromethane	N.D.	1	0.5
1,1-Dichloroethane	N.D.	1	0.5
1,2-Dichloroethane	N.D.	1	0.5
1,1-Dichloroethene	N.D.	1	0.5
1,2-Dichloroethene (Total)	N.D.	1	0.5
1,2-Dichloropropane	N.D.	1	0.5
cis-1,3-Dichloropropene	N.D.	1	0.5
trans-1,3-Dichloropropene	N.D.	1	0.5
Ethylbenzene	N.D.	1	0.5
Methylene Chloride	N.D.	4	2
1,1,2,2-Tetrachloroethane	N.D.	1	0.5
Tetrachloroethene	N.D.	1	0.5
Toluene	N.D.	1	0.5
1,1,1-Trichloroethane	N.D.	1	0.5
1,1,2-Trichloroethane	N.D.	1	0.5
Trichloroethene	N.D.	1	0.5
Vinyl Chloride	N.D.	1	0.5
Batch number: W161892AA	Sample number(s): 8455699		
Acrolein	N.D.	100	40
Acrylonitrile	N.D.	20	4
Benzene	N.D.	1	0.5
Bromodichloromethane	N.D.	1	0.5
Bromoform	N.D.	4	0.5
Bromomethane	N.D.	1	0.5
Carbon Tetrachloride	N.D.	1	0.5
Chlorobenzene	N.D.	1	0.5
Chloroethane	N.D.	1	0.5
2-Chloroethyl Vinyl Ether	N.D.	10	2
Chloroform	N.D.	1	0.5
Chloromethane	N.D.	1	0.5
Dibromochloromethane	N.D.	1	0.5
1,1-Dichloroethane	N.D.	1	0.5
1,2-Dichloroethane	N.D.	1	0.5
1,1-Dichloroethene	N.D.	1	0.5
1,2-Dichloroethene (Total)	N.D.	1	0.5
1,2-Dichloropropane	N.D.	1	0.5
cis-1,3-Dichloropropene	N.D.	1	0.5
trans-1,3-Dichloropropene	N.D.	1	0.5
Ethylbenzene	N.D.	1	0.5
Methylene Chloride	N.D.	4	2
1,1,2,2-Tetrachloroethane	N.D.	1	0.5
Tetrachloroethene	N.D.	1	0.5
Toluene	N.D.	1	0.5
1,1,1-Trichloroethane	N.D.	1	0.5
1,1,2-Trichloroethane	N.D.	1	0.5
Trichloroethene	N.D.	1	0.5
Vinyl Chloride	N.D.	1	0.5
Batch number: 16184WAH026	Sample number(s): 8455691-8455702		
Acenaphthene	N.D.	0.5	0.1
Acenaphthylene	N.D.	0.5	0.1

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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: Evergreen c/o GHD
Reported: 07/26/2016 15:09

Group Number: 1678000

Method Blank (continued)

Analysis Name	Result ug/l	LOQ** ug/l	MDL ug/l
Anthracene	N.D.	0.5	0.1
Benzidine	N.D.	60	20
Benzo(a)anthracene	N.D.	0.5	0.1
Benzo(a)pyrene	N.D.	0.5	0.1
Benzo(b)fluoranthene	N.D.	0.5	0.1
Benzo(g,h,i)perylene	N.D.	0.5	0.1
Benzo(k)fluoranthene	N.D.	0.5	0.1
4-Bromophenyl-phenylether	N.D.	1	0.5
Butylbenzylphthalate	N.D.	5	2
Di-n-butylphthalate	N.D.	5	2
4-Chloro-3-methylphenol	N.D.	1	0.5
bis(2-Chloroethoxy)methane	N.D.	1	0.5
bis(2-Chloroethyl)ether	N.D.	1	0.5
bis(2-Chloroisopropyl)ether	N.D.	1	0.5
2-Chloronaphthalene	N.D.	1	0.4
2-Chlorophenol	N.D.	1	0.5
4-Chlorophenyl-phenylether	N.D.	1	0.5
Chrysene	N.D.	0.5	0.1
Dibenz(a,h)anthracene	N.D.	0.5	0.1
1,2-Dichlorobenzene	N.D.	1	0.5
1,3-Dichlorobenzene	N.D.	1	0.5
1,4-Dichlorobenzene	N.D.	1	0.5
3,3'-Dichlorobenzidine	N.D.	5	2
2,4-Dichlorophenol	N.D.	1	0.5
Diethylphthalate	N.D.	5	2
2,4-Dimethylphenol	N.D.	1	0.5
Dimethylphthalate	N.D.	5	2
4,6-Dinitro-2-methylphenol	N.D.	15	5
2,4-Dinitrophenol	N.D.	30	10
2,4-Dinitrotoluene	N.D.	5	1
2,6-Dinitrotoluene	N.D.	1	0.5
1,2-Diphenylhydrazine	N.D.	1	0.5
bis(2-Ethylhexyl)phthalate	N.D.	5	2
Fluoranthene	N.D.	0.5	0.1
Fluorene	N.D.	0.5	0.1
Hexachlorobenzene	N.D.	0.5	0.1
Hexachlorobutadiene	N.D.	1	0.5
Hexachlorocyclopentadiene	N.D.	15	5
Hexachloroethane	N.D.	5	1
Indeno(1,2,3-cd)pyrene	N.D.	0.5	0.1
Isophorone	N.D.	1	0.5
Naphthalene	N.D.	0.5	0.1
Nitrobenzene	N.D.	1	0.5
2-Nitrophenol	N.D.	1	0.5
4-Nitrophenol	N.D.	30	10
N-Nitrosodimethylamine	N.D.	5	2
N-Nitroso-di-n-propylamine	N.D.	1	0.5
N-Nitrosodiphenylamine	N.D.	1	0.5
Di-n-octylphthalate	N.D.	5	2
Pentachlorophenol	N.D.	5	1
Phenanthrene	N.D.	0.5	0.1

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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: Evergreen c/o GHD
Reported: 07/26/2016 15:09

Group Number: 1678000

Method Blank (continued)

Analysis Name	Result ug/l	LOQ** ug/l	MDL ug/l
Phenol	N.D.	1	0.5
Pyrene	N.D.	0.5	0.1
1,2,4-Trichlorobenzene	N.D.	1	0.5
2,4,6-Trichlorophenol	N.D.	1	0.5
Batch number: 161840011A	Sample number(s): 8455691-8455702		
Aldrin	N.D.	0.0080	0.0016
Alpha BHC	N.D.	0.0080	0.0024
Beta BHC	N.D.	0.0080	0.0027
Gamma BHC - Lindane	N.D.	0.0080	0.0016
Chlordane	N.D.	0.40	0.13
p,p-DDD	N.D.	0.016	0.0040
p,p-DDE	N.D.	0.016	0.0040
p,p-DDT	N.D.	0.016	0.0042
Delta BHC	N.D.	0.0080	0.0027
Dieldrin	N.D.	0.016	0.0042
Endosulfan I	N.D.	0.0080	0.0034
Endosulfan II	N.D.	0.024	0.012
Endosulfan Sulfate	N.D.	0.016	0.0046
Endrin	N.D.	0.016	0.0065
Endrin Aldehyde	N.D.	0.080	0.016
Heptachlor	N.D.	0.0080	0.0016
Heptachlor Epoxide	N.D.	0.0080	0.0018
Methoxychlor	N.D.	0.080	0.024
Toxaphene	N.D.	0.80	0.24
Batch number: 161871848008	Sample number(s): 8455691-8455702		
Antimony	N.D.	20.0	7.7
Arsenic	N.D.	20.0	9.7
Beryllium	N.D.	5.0	0.67
Cadmium	N.D.	5.0	0.49
Chromium	N.D.	15.0	1.8
Cobalt	N.D.	5.0	1.9
Copper	N.D.	10.0	4.1
Lead	N.D.	15.0	6.2
Nickel	N.D.	10.0	2.8
Selenium	N.D.	20.0	9.7
Silver	N.D.	5.0	1.9
Thallium	N.D.	30.0	9.4
Zinc	N.D.	20.0	5.4
Batch number: 161875713010	Sample number(s): 8455691-8455702		
Mercury	N.D.	0.20	0.050

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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: Evergreen c/o GHD
Reported: 07/26/2016 15:09

Group Number: 1678000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W161872AA	Sample number(s): 8455691-8455698								
Acrolein	150	130.94	150	153.96	87	103	47-134	16	30
Acrylonitrile	100	91.66	100	82.61	92	83	62-121	10	30
Benzene	20	22	20	21.76	110	109	78-120	1	30
Bromodichloromethane	20	21.58	20	21.04	108	105	80-120	3	30
Bromoform	20	17.57	20	16.92	88	85	67-120	4	30
Bromomethane	20	13.75	20	13.94	69	70	53-130	1	30
Carbon Tetrachloride	20	22.25	20	22.36	111	112	74-130	1	30
Chlorobenzene	20	21.82	20	21.14	109	106	80-120	3	30
Chloroethane	20	16.9	20	16.79	85	84	56-120	1	30
2-Chloroethyl Vinyl Ether	20	18.86	20	18.37	94	92	65-120	3	30
Chloroform	20	22.51	20	21.96	113	110	80-120	2	30
Chloromethane	20	18.04	20	18.16	90	91	65-129	1	30
Dibromochloromethane	20	20.03	20	19.91	100	100	78-120	1	30
1,1-Dichloroethane	20	22.6	20	22.02	113	110	80-120	3	30
1,2-Dichloroethane	20	22.17	20	21.35	111	107	72-127	4	30
1,1-Dichloroethene	20	21.98	20	22.18	110	111	76-124	1	30
1,2-Dichloroethene (Total)	40	40.8	40	40.43	102	101	80-120	1	30
1,2-Dichloropropane	20	22.99	20	22.76	115	114	80-120	1	30
cis-1,3-Dichloropropene	20	21.02	20	20.7	105	103	80-120	2	30
trans-1,3-Dichloropropene	20	21.8	20	21.86	109	109	76-120	0	30
Ethylbenzene	20	22.38	20	22.01	112	110	78-120	2	30
Methylene Chloride	20	22.39	20	22.32	112	112	77-121	0	30
1,1,2,2-Tetrachloroethane	20	22.16	20	21.96	111	110	72-120	1	30
Tetrachloroethene	20	20.21	20	20.17	101	101	80-129	0	30
Toluene	20	21.3	20	21.14	106	106	80-120	1	30
1,1,1-Trichloroethane	20	20.11	20	19.76	101	99	66-126	2	30
1,1,2-Trichloroethane	20	21.64	20	20.33	108	102	80-120	6	30
Trichloroethene	20	20.93	20	21.04	105	105	80-120	1	30
Vinyl Chloride	20	18.68	20	18.36	93	92	69-120	2	30
Batch number: W161891AA	Sample number(s): 8455700-8455703								
Acrolein	150	201.54	150	187.28	134	125	47-134	7	30
Acrylonitrile	100	70.15	100	78.99	70	79	62-121	12	30
Benzene	20	20.24	20	20.42	101	102	78-120	1	30
Bromodichloromethane	20	19.12	20	18.64	96	93	80-120	3	30
Bromoform	20	17.28	20	17.26	86	86	67-120	0	30
Bromomethane	20	15.8	20	15.66	79	78	53-130	1	30
Carbon Tetrachloride	20	19.31	20	20.14	97	101	74-130	4	30
Chlorobenzene	20	20.72	20	20.63	104	103	80-120	0	30
Chloroethane	20	17.59	20	17.58	88	88	56-120	0	30
2-Chloroethyl Vinyl Ether	20	16.97	20	17.89	85	89	65-120	5	30
Chloroform	20	19.85	20	19.98	99	100	80-120	1	30
Chloromethane	20	18.05	20	17.72	90	89	65-129	2	30
Dibromochloromethane	20	18.78	20	18.87	94	94	78-120	0	30
1,1-Dichloroethane	20	20.12	20	19.94	101	100	80-120	1	30
1,2-Dichloroethane	20	18.17	20	18.23	91	91	72-127	0	30
1,1-Dichloroethene	20	22.34	20	21.95	112	110	76-124	2	30
1,2-Dichloroethene (Total)	40	40.51	40	40.75	101	102	80-120	1	30
1,2-Dichloropropane	20	20.92	20	20.97	105	105	80-120	0	30
cis-1,3-Dichloropropene	20	18.7	20	19.37	94	97	80-120	4	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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: Evergreen c/o GHD
Reported: 07/26/2016 15:09

Group Number: 1678000

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
trans-1,3-Dichloropropene	20	19.06	20	18.61	95	93	76-120	2	30
Ethylbenzene	20	20.8	20	20.55	104	103	78-120	1	30
Methylene Chloride	20	21.94	20	21.68	110	108	77-121	1	30
1,1,2,2-Tetrachloroethane	20	19.92	20	19.47	100	97	72-120	2	30
Tetrachloroethene	20	21.08	20	21.09	105	105	80-129	0	30
Toluene	20	20.63	20	20.28	103	101	80-120	2	30
1,1,1-Trichloroethane	20	17.72	20	18.43	89	92	66-126	4	30
1,1,2-Trichloroethane	20	18.96	20	19.88	95	99	80-120	5	30
Trichloroethene	20	20.73	20	20.7	104	104	80-120	0	30
Vinyl Chloride	20	19.15	20	18.9	96	94	69-120	1	30
Batch number: W161892AA	Sample number(s): 8455699								
Acrolein	150	168.14	150	161.2	112	107	47-134	4	30
Acrylonitrile	100	68.26	100	73.39	68	73	62-121	7	30
Benzene	20	20.53	20	20.93	103	105	78-120	2	30
Bromodichloromethane	20	18.69	20	18.62	93	93	80-120	0	30
Bromoform	20	12.92	20	13.51	65*	68	67-120	4	30
Bromomethane	20	14.86	20	15.23	74	76	53-130	2	30
Carbon Tetrachloride	20	19.6	20	19.74	98	99	74-130	1	30
Chlorobenzene	20	21.09	20	21.34	105	107	80-120	1	30
Chloroethane	20	16.8	20	17.03	84	85	56-120	1	30
2-Chloroethyl Vinyl Ether	20	17.36	20	17.42	87	87	65-120	0	30
Chloroform	20	19.96	20	20.45	100	102	80-120	2	30
Chloromethane	20	16.73	20	16.97	84	85	65-129	1	30
Dibromochloromethane	20	17.07	20	17.27	85	86	78-120	1	30
1,1-Dichloroethane	20	20.06	20	19.67	100	98	80-120	2	30
1,2-Dichloroethane	20	18.57	20	18.96	93	95	72-127	2	30
1,1-Dichloroethene	20	22.77	20	22.57	114	113	76-124	1	30
1,2-Dichloroethene (Total)	40	40.13	40	39.85	100	100	80-120	1	30
1,2-Dichloropropane	20	21.21	20	21.11	106	106	80-120	0	30
cis-1,3-Dichloropropene	20	17.87	20	18.15	89	91	80-120	2	30
trans-1,3-Dichloropropene	20	17.35	20	18.09	87	90	76-120	4	30
Ethylbenzene	20	20.85	20	21.25	104	106	78-120	2	30
Methylene Chloride	20	21.65	20	22.05	108	110	77-121	2	30
1,1,2,2-Tetrachloroethane	20	19.78	20	20.15	99	101	72-120	2	30
Tetrachloroethene	20	21.54	20	22.08	108	110	80-129	3	30
Toluene	20	20.45	20	20.89	102	104	80-120	2	30
1,1,1-Trichloroethane	20	17.97	20	18.41	90	92	66-126	2	30
1,1,2-Trichloroethane	20	20.09	20	19.81	100	99	80-120	1	30
Trichloroethene	20	21.12	20	20.93	106	105	80-120	1	30
Vinyl Chloride	20	18.18	20	18.89	91	94	69-120	4	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 16184WAH026	Sample number(s): 8455691-8455702								
Acenaphthene	50	50.03			100		69-123		
Acenaphthylene	50	51.06			102		67-125		
Anthracene	50	48.73			97		68-126		
Benzidine	250	110.19			44		10-111		
Benzo(a)anthracene	50	53.54			107		69-133		
Benzo(a)pyrene	50	46.27			93		68-126		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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: Evergreen c/o GHD
Reported: 07/26/2016 15:09

Group Number: 1678000

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzo(b)fluoranthene	50	47.75			96		71-131		
Benzo(g,h,i)perylene	50	44.78			90		62-132		
Benzo(k)fluoranthene	50	47.49			95		72-128		
4-Bromophenyl-phenylether	50	51.52			103		64-129		
Butylbenzylphthalate	50	49.47			99		56-124		
Di-n-butylphthalate	50	50.14			100		61-125		
4-Chloro-3-methylphenol	50	49.08			98		65-125		
bis(2-Chloroethoxy)methane	50	52.24			104		67-124		
bis(2-Chloroethyl)ether	50	50.79			102		65-120		
bis(2-Chloroisopropyl)ether	50	48.6			97		63-129		
2-Chloronaphthalene	50	45.08			90		57-126		
2-Chlorophenol	50	47.74			95		59-120		
4-Chlorophenyl-phenylether	50	47.99			96		67-125		
Chrysene	50	53.55			107		71-136		
Dibenz(a,h)anthracene	50	46.37			93		64-133		
1,2-Dichlorobenzene	50	44.6			89		53-119		
1,3-Dichlorobenzene	50	40.97			82		53-111		
1,4-Dichlorobenzene	50	42.96			86		34-123		
3,3'-Dichlorobenzidine	50	38.05			76		39-118		
2,4-Dichlorophenol	50	48.06			96		66-126		
Diethylphthalate	50	49.16			98		55-124		
2,4-Dimethylphenol	50	42.23			84		63-117		
Dimethylphthalate	50	44.28			89		26-133		
4,6-Dinitro-2-methylphenol	50	47.01			94		64-124		
2,4-Dinitrophenol	100	81.09			81		42-129		
2,4-Dinitrotoluene	50	50.14			100		71-131		
2,6-Dinitrotoluene	50	49.68			99		71-133		
1,2-Diphenylhydrazine	50	53.31			107		64-127		
bis(2-Ethylhexyl)phthalate	50	50.69			101		66-130		
Fluoranthene	50	52.48			105		68-129		
Fluorene	50	49.31			99		71-127		
Hexachlorobenzene	50	52.59			105		64-128		
Hexachlorobutadiene	50	25.18			50		23-129		
Hexachlorocyclopentadiene	100	18.89			19		10-101		
Hexachloroethane	50	33.41			67		23-121		
Indeno(1,2,3-cd)pyrene	50	46.59			93		62-128		
Isophorone	50	51.3			103		68-125		
Naphthalene	50	47.43			95		62-121		
Nitrobenzene	50	50.15			100		70-121		
2-Nitrophenol	50	50.68			101		67-131		
4-Nitrophenol	50	32.52			65		11-88		
N-Nitrosodimethylamine	50	39.92			80		28-99		
N-Nitroso-di-n-propylamine	50	51.22			102		63-121		
N-Nitrosodiphenylamine	50	48.11			96		65-125		
Di-n-octylphthalate	50	46.8			94		73-131		
Pentachlorophenol	50	51.28			103		53-133		
Phenanthrene	50	48.17			96		65-120		
Phenol	50	30.17			60		19-82		
Pyrene	50	47.24			94		68-118		
1,2,4-Trichlorobenzene	50	40.85			82		59-117		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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: Evergreen c/o GHD
Reported: 07/26/2016 15:09

Group Number: 1678000

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2,4,6-Trichlorophenol	50	50.5			101		71-130		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 161840011A	Sample number(s): 8455691-8455702								
Aldrin	0.102	0.0907	0.102	0.0881	89	86	28-119	3	30
Alpha BHC	0.0980	0.0925	0.0980	0.0894	94	91	47-132	3	30
Beta BHC	0.102	0.0956	0.102	0.0934	94	92	56-125	2	30
Gamma BHC - Lindane	0.0980	0.0937	0.0980	0.0924	96	94	51-132	1	30
Chlordane	2.01	1.63	2.01	1.65	81	82	55-124	2	30
p,p-DDD	0.198	0.203	0.198	0.196	102	99	67-123	4	30
p,p-DDE	0.204	0.193	0.204	0.190	95	93	51-129	2	30
p,p-DDT	0.198	0.186	0.198	0.182	94	92	66-119	2	30
Delta BHC	0.102	0.100	0.102	0.0983	98	96	76-126	2	30
Dieldrin	0.198	0.193	0.198	0.188	97	95	54-126	2	30
Endosulfan I	0.0980	0.0872	0.0980	0.0861	89	88	51-118	1	30
Endosulfan II	0.203	0.182	0.203	0.179	89	88	54-124	2	30
Endosulfan Sulfate	0.201	0.195	0.201	0.194	97	96	41-133	1	30
Endrin	0.202	0.195	0.202	0.192	96	95	35-143	1	30
Endrin Aldehyde	0.207	0.182	0.207	0.185	88	89	40-135	1	20
Heptachlor	0.0980	0.0892	0.0980	0.0886	91	90	38-135	1	30
Heptachlor Epoxide	0.102	0.0941	0.102	0.0941	92	92	56-132	0	30
Methoxychlor	0.994	0.949	0.994	0.928	96	93	39-143	2	30
Toxaphene	5.00	6.26	5.00	7.30	125	146	48-148	15	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 161871848008	Sample number(s): 8455691-8455702								
Antimony	500	492.96			99		80-120		
Arsenic	150	159.61			106		80-120		
Beryllium	50	48.58			97		80-120		
Cadmium	50	50.84			102		80-120		
Chromium	200	198.1			99		80-120		
Cobalt	500	511.86			102		80-120		
Copper	250	271.21			108		80-120		
Lead	150	150.37			100		80-120		
Nickel	500	514.36			103		80-120		
Selenium	150	150.05			100		80-120		
Silver	50	50.8			102		80-120		
Thallium	150	184.09			123*		80-120		
Zinc	500	500.14			100		80-120		
Batch number: 161875713010	Sample number(s): 8455691-8455702								
Mercury	1.00	1.01			101		80-120		

MS/MSD

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

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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: Evergreen c/o GHD
Reported: 07/26/2016 15:09

Group Number: 1678000

MS/MSD

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

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 16184WAH026	Sample number(s): 8455691-8455702 UNSPK: P454547									
Acenaphthene	N.D.	49.8	47.03	49.6	46.26	94	93	69-123	2	30
Acenaphthylene	N.D.	49.8	49.65	49.6	49.34	100	99	67-125	1	30
Anthracene	0.169	49.8	48.39	49.6	47.52	97	95	68-126	2	30
Benzidine	N.D.	249	129.2	248.02	122.87	52	50	10-111	5	30
Benzo(a)anthracene	N.D.	49.8	53.05	49.6	52.24	107	105	69-133	2	30
Benzo(a)pyrene	N.D.	49.8	45.97	49.6	46.46	92	94	68-126	1	30
Benzo(b)fluoranthene	N.D.	49.8	47.91	49.6	46.7	96	94	71-131	3	30
Benzo(g,h,i)perylene	N.D.	49.8	43.95	49.6	43.12	88	87	62-132	2	30
Benzo(k)fluoranthene	N.D.	49.8	44.79	49.6	46.06	90	93	72-128	3	30
4-Bromophenyl-phenylether	N.D.	49.8	50.02	49.6	48.61	100	98	64-129	3	30
Butylbenzylphthalate	N.D.	49.8	46.7	49.6	45.48	94	92	56-124	3	30
Di-n-butylphthalate	N.D.	49.8	47.44	49.6	47.01	95	95	61-125	1	30
4-Chloro-3-methylphenol	N.D.	49.8	46.81	49.6	48.66	94	98	65-125	4	30
bis(2-Chloroethoxy)methane	N.D.	49.8	50.53	49.6	50.19	101	101	67-124	1	30
bis(2-Chloroethyl)ether	N.D.	49.8	48.68	49.6	48.46	98	98	65-120	0	30
bis(2-Chloroisopropyl)ether	N.D.	49.8	47.74	49.6	47.17	96	95	63-129	1	30
2-Chloronaphthalene	N.D.	49.8	47.21	49.6	46.87	95	94	57-126	1	30
2-Chlorophenol	N.D.	49.8	46.42	49.6	47.14	93	95	59-120	2	30
4-Chlorophenyl-phenylether	N.D.	49.8	45.42	49.6	44.71	91	90	67-125	2	30
Chrysene	N.D.	49.8	52.27	49.6	51.97	105	105	71-136	1	30
Dibenz(a,h)anthracene	N.D.	49.8	45.62	49.6	45.05	92	91	64-133	1	30
1,2-Dichlorobenzene	N.D.	49.8	43.41	49.6	43.36	87	87	53-119	0	30
1,3-Dichlorobenzene	N.D.	49.8	40.38	49.6	40.22	81	81	53-111	0	30
1,4-Dichlorobenzene	N.D.	49.8	41.38	49.6	40.78	83	82	34-123	1	30
3,3'-Dichlorobenzidine	N.D.	49.8	35.05	49.6	33.21	70	67	39-118	5	30
2,4-Dichlorophenol	N.D.	49.8	46.99	49.6	47.78	94	96	66-126	2	30
Diethylphthalate	N.D.	49.8	40.57	49.6	40.97	81	83	55-124	1	30
2,4-Dimethylphenol	N.D.	49.8	42.72	49.6	42.89	86	86	63-117	0	30
Dimethylphthalate	N.D.	49.8	30.12	49.6	31.36	60	63	26-133	4	30
4,6-Dinitro-2-methylphenol	N.D.	49.8	45.39	49.6	44.02	91	89	64-124	3	30
2,4-Dinitrophenol	N.D.	99.6	84.35	99.21	84.99	85	86	42-129	1	30
2,4-Dinitrotoluene	N.D.	49.8	46.19	49.6	46.65	93	94	71-131	1	30
2,6-Dinitrotoluene	N.D.	49.8	48.08	49.6	47.67	97	96	71-133	1	30
1,2-Diphenylhydrazine	N.D.	49.8	51.78	49.6	50.34	104	101	64-127	3	30
bis(2-Ethylhexyl)phthalate	N.D.	49.8	50.61	49.6	50.12	102	101	66-130	1	30
Fluoranthene	N.D.	49.8	50.86	49.6	49.73	102	100	68-129	2	30
Fluorene	N.D.	49.8	47.17	49.6	46.63	95	94	71-127	1	30
Hexachlorobenzene	N.D.	49.8	51.26	49.6	48.61	103	98	64-128	5	30
Hexachlorobutadiene	N.D.	49.8	26.82	49.6	26.12	54	53	23-129	3	30
Hexachlorocyclopentadiene	N.D.	99.6	30.89	99.21	30.34	31	31	10-101	2	30
Hexachloroethane	N.D.	49.8	33.65	49.6	32.98	68	66	23-121	2	30
Indeno(1,2,3-cd)pyrene	N.D.	49.8	46.1	49.6	45.54	93	92	62-128	1	30
Isophorone	N.D.	49.8	49.51	49.6	49.87	99	101	68-125	1	30
Naphthalene	82.42	49.8	133.21	49.6	133.21	102	102	62-121	0	30
Nitrobenzene	N.D.	49.8	49.04	49.6	49.41	98	100	70-121	1	30
2-Nitrophenol	N.D.	49.8	49.75	49.6	49.51	100	100	67-131	0	30
4-Nitrophenol	N.D.	49.8	31.08	49.6	32.2	62	65	11-88	4	30
N-Nitrosodimethylamine	N.D.	49.8	39.89	49.6	40.26	80	81	28-99	1	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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: Evergreen c/o GHD
Reported: 07/26/2016 15:09

Group Number: 1678000

MS/MSD (continued)

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

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
N-Nitroso-di-n-propylamine	N.D.	49.8	49.88	49.6	50.11	100	101	63-121	0	30
N-Nitrosodiphenylamine	N.D.	49.8	48.64	49.6	46.59	98	94	65-125	4	30
Di-n-octylphthalate	N.D.	49.8	46.22	49.6	46.33	93	93	73-131	0	30
Pentachlorophenol	N.D.	49.8	53.36	49.6	52.16	107	105	53-133	2	30
Phenanthrene	N.D.	49.8	47.12	49.6	45.82	95	92	65-120	3	30
Phenol	7.54	49.8	38.27	49.6	38.37	62	62	19-82	0	30
Pyrene	N.D.	49.8	46.41	49.6	45.29	93	91	68-118	2	30
1,2,4-Trichlorobenzene	N.D.	49.8	39.39	49.6	39.8	79	80	59-117	1	30
2,4,6-Trichlorophenol	N.D.	49.8	50.49	49.6	50.11	101	101	71-130	1	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 161871848008	Sample number(s): 8455691-8455702 UNSPK: 8455691									
Antimony	N.D.	500	511.7	500	499.08	102	100	75-125	2	20
Arsenic	205.1	150	376.41	150	365.63	114	107	75-125	3	20
Beryllium	N.D.	50	50.57	50	49.86	101	100	75-125	1	20
Cadmium	N.D.	50	50.75	50	49.94	102	100	75-125	2	20
Chromium	N.D.	200	202	200	201.34	101	101	75-125	0	20
Cobalt	N.D.	500	508.26	500	498.72	102	100	75-125	2	20
Copper	N.D.	250	276.19	250	273.22	110	109	75-125	1	20
Lead	N.D.	150	146.41	150	145.87	98	97	75-125	0	20
Nickel	N.D.	500	505.23	500	497.86	101	100	75-125	1	20
Selenium	N.D.	150	145.35	150	135.76	97	91	75-125	7	20
Silver	N.D.	50	52.19	50	51.38	104	103	75-125	2	20
Thallium	N.D.	150	183.15	150	182.52	122	122	75-125	0	20
Zinc	N.D.	500	506.57	500	498.02	101	100	75-125	2	20
Batch number: 161875713010	Sample number(s): 8455691-8455702 UNSPK: 8455691									
Mercury	N.D.	1.00	1.08	1.00	1.11	108	111	80-120	2	20

Laboratory Duplicate

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

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 161871848008	Sample number(s): 8455691-8455702 BKG: 8455691			
Antimony	N.D.	N.D.	0 (1)	20
Arsenic	205.1	192.19	6	20
Beryllium	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Cobalt	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Nickel	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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: Evergreen c/o GHD
Reported: 07/26/2016 15:09

Group Number: 1678000

Laboratory Duplicate (continued)

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

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Selenium	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20
Thallium	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
Batch number: 161875713010	Sample number(s): 8455691-8455702 BKG: 8455691			
Mercury	N.D.	N.D.	0 (1)	20

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: Modified PPL VOCs 8260
Batch number: W161872AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8455691	104	102	100	100
8455692	104	104	102	104
8455693	103	97	103	98
8455694	100	104	103	103
8455695	101	101	101	100
8455696	99	98	102	102
8455697	100	98	102	106
8455698	101	101	101	104
Blank	101	101	102	98
LCS	99	95	103	105
LCSD	100	101	103	105
Limits:	80-116	77-113	80-113	78-113

Analysis Name: Modified PPL VOCs 8260
Batch number: W161891AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8455700	100	102	98	97
8455701	96	98	99	96
8455702	98	100	97	94
8455703	99	103	97	94
Blank	98	102	98	95
LCS	96	97	99	99
LCSD	96	96	100	100
Limits:	80-116	77-113	80-113	78-113

Analysis Name: Modified PPL VOCs 8260
Batch number: W161892AA

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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: Evergreen c/o GHD
Reported: 07/26/2016 15:09

Group Number: 1678000

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
8455699	105	105	96	95
Blank	99	103	97	94
LCS	97	95	98	99
LCSD	98	95	99	98
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TCL SW846 8270C Water
Batch number: 16184WAH026

	2-Fluorophenol	Phenol-d6	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
8455691	66	51	104	96	84	94
8455692	54	61	68	87	80	83
8455693	53	55	68	91	80	80
8455694	8*	22	18*	85	76	77
8455695	62	55	91	94	86	68
8455696	72	68	106	23*	87	83
8455697	78	68	107	74	86	93
8455698	68	65	106	88	83	71
8455699	70	64	109	97	87	88
8455700	67	65	105	97	86	89
8455701	70	66	105	95	85	85
8455702	68	51	104	95	86	75
Blank	72	54	112	98	89	106
LCS	73	58	107	98	91	95
MS	70	55	101	96	87	93
MSD	71	55	101	96	87	93
Limits:	10-103	10-85	22-150	46-128	61-112	41-125

Analysis Name: PPL Pesticides
Batch number: 161840011A

	Tetrachloro-m-xylene	Decachlorobiphenyl
8455691	61	50
8455692	63	43
8455693	53	40
8455694	63	47
8455695	77	81
8455696	64	40
8455697	69	13*
8455698	64	39
8455699	70	30*
8455700	61	39
8455701	66	34
8455702	70	46
Blank	81	78
LCS	83	80
LCSD	75	83
Limits:	29-129	32-149

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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: Evergreen c/o GHD
Reported: 07/26/2016 15:09

Group Number: 1678000

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 10177 Group # 1678000 Sample # 8455691-703

COC # 504418

For Lab Use Only 182

FSC:

SCR#: 190776

Client Information

Client: GHD

Acct. #:

Project Name/#: Evergreen

PWSID #:

Project Manager: Dave Steele

P.O. #:

Sampler: A Hunter, R Mehaltck, M. Marcus

Quote #:

State where samples were collected: PA

For Compliance: Yes ☐ No ☐

Matrix

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

Analysis Requested

Preservation Codes: H, N, —

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Mod. PPL VOCs 8260	PPL Metals Fe, Mn	PPL Rest.	PPL SVOCs
GW-1110264L-MW530L-062816-AH-010	6/28/16	1800	X		7	X	X	X	X
GW-1110264L-MW533U-062916-RM-011	6/29/16	1110	X		7	X	X	X	X
GW-1110264L-MW533L-062916-RM-012	6/29/16	1255	X		7	X	X	X	X
GW-1110264L-MW551-062916-MM-013	6/29/16	1315	X		7	X	X	X	X
GW-1110264L-MW552-062916-AH-014	6/29/16	1235	X		7	X	X	X	X
GW-1110264L-MW540-062916-RM-015	6/29/16	1520	X		7	X	X	X	X
GW-1110264L-MW539-062916-AH-016	6/29/16	1705	X		7	X	X	X	X
GW-1110264L-MW184-062916-MM-018	6/29/16	1700	X		7	X	X	X	X
GW-1110264L-MW182-062916-MM-017	6/29/16	1610	X		7	X	X	X	X
GW-1110264L-MW187-062916-RM-019	6/29/16	1745	X		7	X	X	X	X

Preservation Codes

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

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

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

Date results are needed: ____

E-mail address: ____

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
Bottle Storage	6/27/16	0615	[signature]	6/27/16	0615
[signature]	6/27/16	0810			
[signature]	6/29/16	1900	[signature]	6/30/16	0930
[signature]	6/30/16	1645			
			[signature]	6/30/16	1645

EDD Required? Yes No

If yes, format: ____

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 0.8-3.3 °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

Environmental Analysis Request/Chain of Custody

eurofins

Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 10177 Group # 1678000 Sample # 8455691-703

COC # 504420

For Lab Use Only 282

FSC:

SCR#:

Client Information

Client: GHD

Acct. #:

Project Name/#: Evergreen

PWSID #:

Project Manager: Dave Steele

P.O. #:

Sampler: A Hunter, R Mehalick, M. Marcus

Quote #:

State where samples were collected: PA

For Compliance: Yes ☐ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐

Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐

Other: ____

Analysis Requested

Preservation Codes: H, N

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Mod. PPL VOCs 8260 (H)	PPL Metals + Li, Fe (N)	PPL Pest.	PPL SVOCs	Remarks
GW-1110264l-MW27-062916-RM-020	6/29/16	1815	X		7	X	X	X	X	
GW-1110264l-MW132-062916-MM-021	6/29/16	1845	X		7	X	X	X	X	
TB-1110264l-062916-001	6/29/16	—	X		2	X				trip blank

Preservation Codes

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

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

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

Date results are needed: ____

E-mail address: ____

Relinquished by	Date	Time	Received by	Date	Time
[signature]	6/29/16	1900	[signature]	6/30/16	0911
[signature]	6/30/16	1641			
			[signature]	6/30/16	1645

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: ____

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 0.8-3.3 °C

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 152334

Group Number(s): 1678000

Client: GHD

Delivery and Receipt Information

Delivery Method:	ELLE Courier	Arrival Timestamp:	06/30/2016 16:45
Number of Packages:	7	Number of Projects:	4
State/Province of Origin:	PA		

Arrival Condition Summary

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

Unpacked by Patrick Engle (3472) at 19:41 on 06/30/2016

Samples Chilled Details

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

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT121	3.0	DT	Wet	Y	Bagged	N
2	DT121	3.0	DT	Wet	Y	Bagged	N
3	DT121	0.8	DT	Wet	Y	Bagged	N
4	DT121	2.6	DT	Wet	Y	Bagged	N
5	DT121	3.3	DT	Wet	Y	Bagged	N
6	DT121	1.7	DT	Wet	Y	Bagged	N
7	DT121	2.3	DT	Wet	Y	Bagged	N

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
GW-11102641-MW530L -062816-AH-010	8	7	Received Metals Batch QC not listed on COC

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

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

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

< less than

> greater than

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

ppb parts per billion

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

Laboratory Data Qualifiers:

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

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

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

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

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

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

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

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.