ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

June 04, 2013

Project: Sunoco M.H.(RCRA)

Submittal Date: 05/23/2013
Group Number: 1392212
PO Number: SUNOCO M.H. (RCRA)
State of Sample Origin: PA

Client Sample Description	Lancaster Labs (LLI) #
MW40 Grab Groundwater Sample	7068424
MW86 Grab Groundwater Sample	7068425
MW17 Grab Groundwater Sample	7068426
MW28 Grab Groundwater Sample	7068427
MW30 Grab Groundwater Sample	7068428
Trip Blank Water Sample	7068429
MW40A Grab Groundwater Sample	7068430
MW40B Grab Groundwater Sample	7068431
MW40C Grab Groundwater Sample	7068432
MW40D Grab Groundwater Sample	7068433
MW86A Grab Groundwater Sample	7068434
MW86B Grab Groundwater Sample	7068435
MW86C Grab Groundwater Sample	7068436
MW86D Grab Groundwater Sample	7068437
MW17A Grab Groundwater Sample	7068438
MW17B Grab Groundwater Sample	7068439
MW17C Grab Groundwater Sample	7068440
MW17D Grab Groundwater Sample	7068441
MW28A Grab Groundwater Sample	7068442
MW28B Grab Groundwater Sample	7068443
MW28C Grab Groundwater Sample	7068444
MW28D Grab Groundwater Sample	7068445
MW30A Grab Groundwater Sample	7068446
MW30B Grab Groundwater Sample	7068447
MW30C Grab Groundwater Sample	7068448
MW30D Grab Groundwater Sample	7068449

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

ELECTRONIC COPY TO Sunoco c/o Stantec Attn: Jennifer Menges

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252

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Analysis Report

Sample Description: MW40 Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068424
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/22/2013 11:25 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MHM40

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**EPA 624**		**ug/l**	**ug/l**	
10371	Benzene	71-43-2	N.D.	0.9	1
10371	Ethylbenzene	100-41-4	N.D.	0.8	1
10371	Toluene	108-88-3	N.D.	0.8	1
10371	Xylene (total)	1330-20-7	N.D.	0.9	1
GC/MS Semivolatiles	**EPA 625**		**ug/l**	**ug/l**	
10334	Acenaphthene	83-32-9	0.4 J	0.3	1
10334	Anthracene	120-12-7	N.D.	0.2	1
10334	Benzo(a)anthracene	56-55-3	N.D.	0.2	1
10334	Benzo(a)pyrene	50-32-8	N.D.	0.3	1
10334	Di-n-butylphthalate	84-74-2	N.D.	0.5	1
10334	Chrysene	218-01-9	N.D.	0.2	1
10334	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1	1
10334	Fluorene	86-73-7	N.D.	0.3	1
10334	Naphthalene	91-20-3	N.D.	0.2	1
10334	Phenanthrene	85-01-8	N.D.	0.2	1
10334	Phenol	108-95-2	N.D.	0.4	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07051	Chromium	7440-47-3	N.D.	0.0011	1
01754	Iron	7439-89-6	1.23	0.0333	1
07055	Lead	7439-92-1	N.D.	0.0051	1
07058	Manganese	7439-96-5	0.176	0.00083	1
01767	Sodium	7440-23-5	157	0.334	2
Wet Chemistry	**EPA 300.0**		**mg/l**	**mg/l**	
00224	Chloride	16887-00-6	184	10.0	50
00228	Sulfate	14808-79-8	8.6	1.5	5
	EPA 335.4		**mg/l**	**mg/l**	
00237	Total Cyanide (water)	57-12-5	N.D.	0.0050	1
	EPA 420.4		**mg/l**	**mg/l**	
00434	Phenols (water)	n.a.	N.D.	0.015	1
	EPA 1664A		**mg/l**	**mg/l**	
00612	SGT-HEM (TPH)	n.a.	5.7	1.4	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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

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Analysis Report

Sample Description: MW40 Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068424
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/22/2013 11:25 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MHM40

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10371	BTEX by 624	EPA 624	1	E131502AA	05/31/2013 02:38	Stephanie A Selis	1
10334	SVOCs 625	EPA 625	1	13144WAD625	05/26/2013 06:57	Holly Berry	1
08108	625 Water Extraction	EPA 625	1	13144WAD625	05/24/2013 15:00	Seth A Farrier	1
07051	Chromium	SW-846 6010B	1	131481848002	05/29/2013 16:58	Katlin N Cataldi	1
01754	Iron	SW-846 6010B	1	131481848002	05/29/2013 16:58	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131481848002	05/29/2013 16:58	Katlin N Cataldi	1
07058	Manganese	SW-846 6010B	1	131481848002	05/29/2013 16:58	Katlin N Cataldi	1
01767	Sodium	SW-846 6010B	1	131481848002	05/30/2013 12:33	Eric L Eby	2
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131481848002	05/29/2013 10:44	James L Mertz	1
00224	Chloride	EPA 300.0	1	13148987133A	05/30/2013 04:16	Clinton M Wilson	50
00228	Sulfate	EPA 300.0	1	13148987133A	05/29/2013 09:40	Clinton M Wilson	5
00237	Total Cyanide (water)	EPA 335.4	1	13151102101A	06/03/2013 07:34	K Robert Caulfeild-James	1
00434	Phenols (water)	EPA 420.4	1	13149113101A	05/30/2013 10:42	K Robert Caulfeild-James	1
00492	Cyanide Water Distillation	EPA 335.4	1	13151102101A	05/31/2013 14:45	Carolyn M Mastropietro	1
00491	Phenol Distillation (water)	EPA 420.4	1	13149113101A	05/29/2013 11:15	Carolyn M Mastropietro	1
00612	SGT-HEM (TPH)	EPA 1664A	1	13144807801A	05/24/2013 10:35	Yolunder Y Bunch	1

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Analysis Report

Sample Description: MW86 Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068425
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/22/2013 09:20 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MHM86

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**EPA 624**		**ug/l**	**ug/l**	
10371	Benzene	71-43-2	N.D.	0.9	1
10371	Ethylbenzene	100-41-4	N.D.	0.8	1
10371	Toluene	108-88-3	N.D.	0.8	1
10371	Xylene (total)	1330-20-7	N.D.	0.9	1
GC/MS Semivolatiles	**EPA 625**		**ug/l**	**ug/l**	
10334	Acenaphthene	83-32-9	N.D.	0.3	1
10334	Anthracene	120-12-7	N.D.	0.2	1
10334	Benzo(a)anthracene	56-55-3	N.D.	0.2	1
10334	Benzo(a)pyrene	50-32-8	N.D.	0.3	1
10334	Di-n-butylphthalate	84-74-2	N.D.	0.5	1
10334	Chrysene	218-01-9	N.D.	0.2	1
10334	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1	1
10334	Fluorene	86-73-7	N.D.	0.3	1
10334	Naphthalene	91-20-3	N.D.	0.2	1
10334	Phenanthrene	85-01-8	N.D.	0.2	1
10334	Phenol	108-95-2	N.D.	0.4	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07051	Chromium	7440-47-3	N.D.	0.0011	1
01754	Iron	7439-89-6	0.381	0.0333	1
07055	Lead	7439-92-1	0.0060 J	0.0051	1
07058	Manganese	7439-96-5	0.0634	0.00083	1
01767	Sodium	7440-23-5	14.0	0.167	1
Wet Chemistry	**EPA 300.0**		**mg/l**	**mg/l**	
00224	Chloride	16887-00-6	7.7	1.0	5
00228	Sulfate	14808-79-8	38.4	1.5	5
	EPA 335.4		**mg/l**	**mg/l**	
00237	Total Cyanide (water)	57-12-5	N.D.	0.0050	1
	EPA 420.4		**mg/l**	**mg/l**	
00434	Phenols (water)	n.a.	N.D.	0.015	1
	EPA 1664A		**mg/l**	**mg/l**	
00612	SGT-HEM (TPH)	n.a.	N.D.	1.4	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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Analysis Report

Sample Description: MW86 Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068425
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/22/2013 09:20 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MHM86

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10371	BTEX by 624	EPA 624	1	E131502AA	05/31/2013 03:01	Stephanie A Selis	1
10334	SVOCs 625	EPA 625	1	13144WAD625	05/26/2013 07:21	Holly Berry	1
08108	625 Water Extraction	EPA 625	1	13144WAD625	05/24/2013 15:00	Seth A Farrier	1
07051	Chromium	SW-846 6010B	1	131481848002	05/29/2013 17:02	Katlin N Cataldi	1
01754	Iron	SW-846 6010B	1	131481848002	05/29/2013 17:02	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131481848002	05/29/2013 17:02	Katlin N Cataldi	1
07058	Manganese	SW-846 6010B	1	131481848002	05/29/2013 17:02	Katlin N Cataldi	1
01767	Sodium	SW-846 6010B	1	131481848002	05/29/2013 17:02	Katlin N Cataldi	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131481848002	05/29/2013 10:44	James L Mertz	1
00224	Chloride	EPA 300.0	1	13148987133A	05/29/2013 09:25	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	13148987133A	05/29/2013 09:25	Clinton M Wilson	5
00237	Total Cyanide (water)	EPA 335.4	1	13151102101A	06/03/2013 07:35	K Robert Caulfeild-James	1
00434	Phenols (water)	EPA 420.4	1	13149113101A	05/30/2013 10:21	K Robert Caulfeild-James	1
00492	Cyanide Water Distillation	EPA 335.4	1	13151102101A	05/31/2013 14:45	Carolyn M Mastropietro	1
00491	Phenol Distillation (water)	EPA 420.4	1	13149113101A	05/29/2013 11:15	Carolyn M Mastropietro	1
00612	SGT-HEM (TPH)	EPA 1664A	1	13144807801A	05/24/2013 10:35	Yolunder Y Bunch	1

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Analysis Report

Sample Description: MW17 Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068426
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/22/2013 09:40 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MHM17

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**EPA 624**		**ug/l**	**ug/l**	
10371	Benzene	71-43-2	N.D.	0.9	1
10371	Ethylbenzene	100-41-4	N.D.	0.8	1
10371	Toluene	108-88-3	N.D.	0.8	1
10371	Xylene (total)	1330-20-7	N.D.	0.9	1
GC/MS Semivolatiles	**EPA 625**		**ug/l**	**ug/l**	
10334	Acenaphthene	83-32-9	N.D.	0.3	1
10334	Anthracene	120-12-7	N.D.	0.2	1
10334	Benzo(a)anthracene	56-55-3	N.D.	0.2	1
10334	Benzo(a)pyrene	50-32-8	N.D.	0.3	1
10334	Di-n-butylphthalate	84-74-2	N.D.	0.5	1
10334	Chrysene	218-01-9	N.D.	0.2	1
10334	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1	1
10334	Fluorene	86-73-7	N.D.	0.3	1
10334	Naphthalene	91-20-3	N.D.	0.2	1
10334	Phenanthrene	85-01-8	N.D.	0.2	1
10334	Phenol	108-95-2	N.D.	0.4	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07051	Chromium	7440-47-3	0.0182	0.0011	1
01754	Iron	7439-89-6	0.472	0.0333	1
07055	Lead	7439-92-1	0.0055 J	0.0051	1
07058	Manganese	7439-96-5	0.0765	0.00083	1
01767	Sodium	7440-23-5	16.8	0.167	1
Wet Chemistry	**EPA 300.0**		**mg/l**	**mg/l**	
00224	Chloride	16887-00-6	28.6	1.0	5
00228	Sulfate	14808-79-8	32.3	1.5	5
	EPA 335.4		**mg/l**	**mg/l**	
00237	Total Cyanide (water)	57-12-5	N.D.	0.0050	1
	EPA 420.4		**mg/l**	**mg/l**	
00434	Phenols (water)	n.a.	N.D.	0.015	1
	EPA 1664A		**mg/l**	**mg/l**	
00612	SGT-HEM (TPH)	n.a.	N.D.	1.4	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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Analysis Report

Sample Description: MW17 Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068426
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/22/2013 09:40 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MHM17

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10371	BTEX by 624	EPA 624	1	E131502AA	05/31/2013 03:25	Stephanie A Selis	1
10334	SVOCs 625	EPA 625	1	13144WAD625	05/26/2013 07:45	Holly Berry	1
08108	625 Water Extraction	EPA 625	1	13144WAD625	05/24/2013 15:00	Seth A Farrier	1
07051	Chromium	SW-846 6010B	1	131481848002	05/29/2013 17:14	Katlin N Cataldi	1
01754	Iron	SW-846 6010B	1	131481848002	05/29/2013 17:14	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131481848002	05/29/2013 17:14	Katlin N Cataldi	1
07058	Manganese	SW-846 6010B	1	131481848002	05/29/2013 17:14	Katlin N Cataldi	1
01767	Sodium	SW-846 6010B	1	131481848002	05/29/2013 17:14	Katlin N Cataldi	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131481848002	05/29/2013 10:44	James L Mertz	1
00224	Chloride	EPA 300.0	1	13148987133A	05/29/2013 10:10	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	13148987133A	05/29/2013 10:10	Clinton M Wilson	5
00237	Total Cyanide (water)	EPA 335.4	1	13151102101A	06/03/2013 07:36	K Robert Caulfeild-James	1
00434	Phenols (water)	EPA 420.4	1	13149113101A	05/30/2013 10:22	K Robert Caulfeild-James	1
00492	Cyanide Water Distillation	EPA 335.4	1	13151102101A	05/31/2013 14:45	Carolyn M Mastropietro	1
00491	Phenol Distillation (water)	EPA 420.4	1	13149113101A	05/29/2013 11:15	Carolyn M Mastropietro	1
00612	SGT-HEM (TPH)	EPA 1664A	1	13144807801A	05/24/2013 10:35	Yolunder Y Bunch	1

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Analysis Report

Sample Description: MW28 Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068427
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/22/2013 10:15 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MHM28

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**EPA 624**		**ug/l**	**ug/l**	
10371	Benzene	71-43-2	N.D.	0.9	1
10371	Ethylbenzene	100-41-4	N.D.	0.8	1
10371	Toluene	108-88-3	N.D.	0.8	1
10371	Xylene (total)	1330-20-7	N.D.	0.9	1
GC/MS Semivolatiles	**EPA 625**		**ug/l**	**ug/l**	
10334	Acenaphthene	83-32-9	N.D.	0.3	1
10334	Anthracene	120-12-7	N.D.	0.2	1
10334	Benzo(a)anthracene	56-55-3	N.D.	0.2	1
10334	Benzo(a)pyrene	50-32-8	N.D.	0.3	1
10334	Di-n-butylphthalate	84-74-2	N.D.	0.5	1
10334	Chrysene	218-01-9	N.D.	0.2	1
10334	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1	1
10334	Fluorene	86-73-7	N.D.	0.3	1
10334	Naphthalene	91-20-3	N.D.	0.2	1
10334	Phenanthrene	85-01-8	N.D.	0.2	1
10334	Phenol	108-95-2	N.D.	0.4	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07051	Chromium	7440-47-3	0.0466	0.0011	1
01754	Iron	7439-89-6	0.602	0.0333	1
07055	Lead	7439-92-1	0.0082 J	0.0051	1
07058	Manganese	7439-96-5	0.193	0.00083	1
01767	Sodium	7440-23-5	39.9	0.167	1
Wet Chemistry	**EPA 300.0**		**mg/l**	**mg/l**	
00224	Chloride	16887-00-6	41.3	2.0	10
00228	Sulfate	14808-79-8	11.4	1.5	5
	EPA 335.4		**mg/l**	**mg/l**	
00237	Total Cyanide (water)	57-12-5	N.D.	0.0050	1
	EPA 420.4		**mg/l**	**mg/l**	
00434	Phenols (water)	n.a.	N.D.	0.015	1
	EPA 1664A		**mg/l**	**mg/l**	
00612	SGT-HEM (TPH)	n.a.	N.D.	1.4	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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

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Analysis Report

Sample Description: MW28 Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068427
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/22/2013 10:15 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MHM28

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10371	BTEX by 624	EPA 624	1	E131502AA	05/31/2013 03:49	Stephanie A Selis	1
10334	SVOCs 625	EPA 625	1	13144WAD625	05/26/2013 08:09	Holly Berry	1
08108	625 Water Extraction	EPA 625	1	13144WAD625	05/24/2013 15:00	Seth A Farrier	1
07051	Chromium	SW-846 6010B	1	131481848002	05/29/2013 17:18	Katlin N Cataldi	1
01754	Iron	SW-846 6010B	1	131481848002	05/29/2013 17:18	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131481848002	05/29/2013 17:18	Katlin N Cataldi	1
07058	Manganese	SW-846 6010B	1	131481848002	05/29/2013 17:18	Katlin N Cataldi	1
01767	Sodium	SW-846 6010B	1	131481848002	05/29/2013 17:18	Katlin N Cataldi	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131481848002	05/29/2013 10:44	James L Mertz	1
00224	Chloride	EPA 300.0	1	13148987133A	05/30/2013 04:31	Clinton M Wilson	10
00228	Sulfate	EPA 300.0	1	13148987133A	05/29/2013 09:55	Clinton M Wilson	5
00237	Total Cyanide (water)	EPA 335.4	1	13151102101A	06/03/2013 07:40	K Robert Caulfeild-James	1
00434	Phenols (water)	EPA 420.4	1	13149113101A	05/30/2013 10:23	K Robert Caulfeild-James	1
00492	Cyanide Water Distillation	EPA 335.4	1	13151102101A	05/31/2013 14:45	Carolyn M Mastropietro	1
00491	Phenol Distillation (water)	EPA 420.4	1	13149113101A	05/29/2013 11:15	Carolyn M Mastropietro	1
00612	SGT-HEM (TPH)	EPA 1664A	1	13144807801A	05/24/2013 10:35	Yolunder Y Bunch	1

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Analysis Report

Sample Description: MW30 Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068428
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/22/2013 10:50 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MHM30

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**EPA 624**		**ug/l**	**ug/l**	
10371	Benzene	71-43-2	2 J	0.9	1
10371	Ethylbenzene	100-41-4	N.D.	0.8	1
10371	Toluene	108-88-3	N.D.	0.8	1
10371	Xylene (total)	1330-20-7	N.D.	0.9	1
GC/MS Semivolatiles	**EPA 625**		**ug/l**	**ug/l**	
10334	Acenaphthene	83-32-9	N.D.	0.3	1
10334	Anthracene	120-12-7	N.D.	0.2	1
10334	Benzo(a)anthracene	56-55-3	N.D.	0.2	1
10334	Benzo(a)pyrene	50-32-8	N.D.	0.3	1
10334	Di-n-butylphthalate	84-74-2	N.D.	0.5	1
10334	Chrysene	218-01-9	N.D.	0.2	1
10334	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1	1
10334	Fluorene	86-73-7	N.D.	0.3	1
10334	Naphthalene	91-20-3	0.5 J	0.2	1
10334	Phenanthrene	85-01-8	N.D.	0.2	1
10334	Phenol	108-95-2	N.D.	0.4	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07051	Chromium	7440-47-3	0.178	0.0011	1
01754	Iron	7439-89-6	1.90	0.0333	1
07055	Lead	7439-92-1	0.0165	0.0051	1
07058	Manganese	7439-96-5	0.0198	0.00083	1
01767	Sodium	7440-23-5	242	0.835	5
Wet Chemistry	**EPA 300.0**		**mg/l**	**mg/l**	
00224	Chloride	16887-00-6	340	20.0	100
00228	Sulfate	14808-79-8	11.4	1.5	5
	EPA 335.4		**mg/l**	**mg/l**	
00237	Total Cyanide (water)	57-12-5	N.D.	0.0050	1
	EPA 420.4		**mg/l**	**mg/l**	
00434	Phenols (water)	n.a.	N.D.	0.015	1
	EPA 1664A		**mg/l**	**mg/l**	
00612	SGT-HEM (TPH)	n.a.	N.D.	1.4	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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Analysis Report

Sample Description: MW30 Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068428
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/22/2013 10:50 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MHM30

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10371	BTEX by 624	EPA 624	1	E131502AA	05/31/2013	04:14	Stephanie A Selis	1
10334	SVOCs 625	EPA 625	1	13144WAD625	05/26/2013	08:34	Holly Berry	1
08108	625 Water Extraction	EPA 625	1	13144WAD625	05/24/2013	15:00	Seth A Farrier	1
07051	Chromium	SW-846 6010B	1	131481848002	05/29/2013	17:22	Katlin N Cataldi	1
01754	Iron	SW-846 6010B	1	131481848002	05/29/2013	17:22	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131481848002	05/29/2013	17:22	Katlin N Cataldi	1
07058	Manganese	SW-846 6010B	1	131481848002	05/29/2013	17:22	Katlin N Cataldi	1
01767	Sodium	SW-846 6010B	1	131481848002	05/30/2013	12:37	Eric L Eby	5
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131481848002	05/29/2013	10:44	James L Mertz	1
00224	Chloride	EPA 300.0	1	13148987133A	05/30/2013	05:16	Clinton M Wilson	100
00228	Sulfate	EPA 300.0	1	13148987133A	05/29/2013	10:25	Clinton M Wilson	5
00237	Total Cyanide (water)	EPA 335.4	1	13151102101A	06/03/2013	07:41	K Robert Caulfeild-James	1
00434	Phenols (water)	EPA 420.4	1	13149113101A	05/30/2013	10:24	K Robert Caulfeild-James	1
00492	Cyanide Water Distillation	EPA 335.4	1	13151102101A	05/31/2013	14:45	Carolyn M Mastropietro	1
00491	Phenol Distillation (water)	EPA 420.4	1	13149113101A	05/29/2013	11:15	Carolyn M Mastropietro	1
00612	SGT-HEM (TPH)	EPA 1664A	1	13144807801A	05/24/2013	10:35	Yolunder Y Bunch	1

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Analysis Report

Sample Description: Trip Blank Water Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068429
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/22/2013 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

MHMT1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**EPA 624**		**ug/l**	**ug/l**	
10371	Benzene	71-43-2	N.D.	0.9	1
10371	Ethylbenzene	100-41-4	N.D.	0.8	1
10371	Toluene	108-88-3	N.D.	0.8	1
10371	Xylene (total)	1330-20-7	N.D.	0.9	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
10371	BTEX by 624	EPA 624	1	E131502AA	05/31/2013 04:38	Stephanie A Selis	1

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Analysis Report

Sample Description: MW40A Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068430
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 08:21 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	24.2	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509A	05/30/2013 03:03	James S Mathiot	1

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Analysis Report

Sample Description: MW40B Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068431
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 08:23 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	19.7	0.50	1

General Sample Comments

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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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509A	05/30/2013 03:18	James S Mathiot	1

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Analysis Report

Sample Description: MW40C Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068432
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 08:25 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	18.3	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509A	05/30/2013 03:33	James S Mathiot	1

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Analysis Report

Sample Description: MW40D Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068433
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 08:27 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	23.7	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509A	05/30/2013 03:48	James S Mathiot	1

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Analysis Report

Sample Description: MW86A Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068434
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 08:50 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	10.5	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509A	05/30/2013 04:03	James S Mathiot	1

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Analysis Report

Sample Description: MW86B Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068435
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 08:56 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	10.2	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509A	05/30/2013 04:18	James S Mathiot	1

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Analysis Report

Sample Description: MW86C Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068436
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 09:02 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	9.2	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509A	05/30/2013 04:50	James S Mathiot	1

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Analysis Report

Sample Description: MW86D Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068437
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 09:08 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	9.4	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509A	05/30/2013 05:05	James S Mathiot	1

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Analysis Report

Sample Description: MW17A Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068438
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 10:05 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	5.7	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509A	05/30/2013 05:21	James S Mathiot	1

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Analysis Report

Sample Description: MW17B Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068439
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 10:09 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	5.4	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509A	05/30/2013 05:36	James S Mathiot	1

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Analysis Report

Sample Description: MW17C Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068440
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 10:13 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry		**SM 5310 C-2000**	**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	5.5	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509B	05/30/2013 06:21	James S Mathiot	1

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Analysis Report

Sample Description: MW17D Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068441
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 10:17 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	5.7	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509B	05/30/2013 06:36	James S Mathiot	1

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Analysis Report

Sample Description: MW28A Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068442
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 11:33 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry		**SM 5310 C-2000**	**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	3.1	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509B	05/30/2013 06:52	James S Mathiot	1

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Analysis Report

Sample Description: MW28B Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068443
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 11:35 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	2.8	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509B	05/30/2013 07:07	James S Mathiot	1

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Analysis Report

Sample Description: MW28C Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068444
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 11:37 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	2.8	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509B	05/30/2013 07:39	James S Mathiot	1

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Analysis Report

Sample Description: MW28D Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068445
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 11:39 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	2.7	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509B	05/30/2013 07:54	James S Mathiot	1

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Analysis Report

Sample Description: MW30A Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068446
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 12:37 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	6.5	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509B	05/30/2013 08:09	James S Mathiot	1

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Analysis Report

Sample Description: MW30B Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068447
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 12:39 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	6.6	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509B	05/30/2013 08:24	James S Mathiot	1

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Analysis Report

Sample Description: MW30C Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068448
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 12:41 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	6.7	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509B	05/30/2013 08:39	James S Mathiot	1

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Analysis Report

Sample Description: MW30D Grab Groundwater Sample
Sunoco M.H.(RCRA)

LLI Sample # WW 7068449
LLI Group # 1392212
Account # 11183

Project Name: Sunoco M.H.(RCRA)

Collected: 05/21/2013 12:43 by CC

Submitted: 05/23/2013 16:15
Reported: 06/04/2013 08:32

Sunoco c/o Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2000**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	6.8	0.50	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/14

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
00273	Total Organic Carbon	SM 5310 C-2000	1	13150049509B	05/30/2013 08:55	James S Mathiot	1

Quality Control Summary

Client Name: Sunoco c/o Stantec Group Number: 1392212
Reported: 06/04/13 at 08:32 AM

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.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: E131502AA	Sample number(s): 7068424-7068429							
Benzene	N.D.	0.9	ug/l	101	102	80-121	1	30
Ethylbenzene	N.D.	0.8	ug/l	106	106	80-120	0	30
Toluene	N.D.	0.8	ug/l	104	104	80-120	0	30
Xylene (total)	N.D.	0.9	ug/l	104	103	80-120	1	30
Batch number: 13144WAD625	Sample number(s): 7068424-7068428							
Acenaphthene	N.D.	0.3	ug/l	88	96	83-117	9	30
Anthracene	N.D.	0.2	ug/l	96	100	75-116	5	30
Benzo(a)anthracene	N.D.	0.2	ug/l	90	98	76-117	8	30
Benzo(a)pyrene	N.D.	0.3	ug/l	93	101	69-143	8	30
Di-n-butylphthalate	N.D.	0.5	ug/l	96	96	82-122	1	30
Chrysene	N.D.	0.2	ug/l	95	101	81-118	6	30
bis(2-Ethylhexyl)phthalate	N.D.	1.	ug/l	95	100	74-118	5	30
Fluorene	N.D.	0.3	ug/l	94	100	80-116	6	30
Naphthalene	N.D.	0.2	ug/l	86	93	80-120	7	30
Phenanthrene	N.D.	0.2	ug/l	94	96	80-119	2	30
Phenol	N.D.	0.4	ug/l	47	45	30-70	4	30
Batch number: 131481848002	Sample number(s): 7068424-7068428							
Chromium	N.D.	0.0011	mg/l	100		90-110		
Iron	N.D.	0.0333	mg/l	99		90-112		
Lead	N.D.	0.0051	mg/l	101		88-110		
Manganese	N.D.	0.00083	mg/l	99		90-110		
Sodium	N.D.	0.167	mg/l	98		87-114		
Batch number: 13148987133A	Sample number(s): 7068424-7068428							
Chloride	N.D.	0.20	mg/l	97		90-110		
Sulfate	N.D.	0.30	mg/l	99		90-110		
Batch number: 13149113101A	Sample number(s): 7068424-7068428							
Phenols (water)	N.D.	0.015	mg/l	99		90-110		
Batch number: 13150049509A	Sample number(s): 7068430-7068439							
Total Organic Carbon	N.D.	0.50	mg/l	100		91-113		
Batch number: 13150049509B	Sample number(s): 7068440-7068449							
Total Organic Carbon	N.D.	0.50	mg/l	100		91-113		
Batch number: 13151102101A	Sample number(s): 7068424-7068428							
Total Cyanide (water)	N.D.	0.0050	mg/l	95		90-110		
Batch number: 13144807801A	Sample number(s): 7068424-7068428							
SGT-HEM (TPH)	N.D.	1.4	mg/l	66	64	64-114	3	26

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Sunoco c/o Stantec Group Number: 1392212
Reported: 06/04/13 at 08:32 AM

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 131481848002	Sample number(s): 7068424-7068428 UNSPK: P066342 BKG: P066342								
Chromium	100	99	81-120	1	20	0.0017 J	0.0016 J	6 (1)	20
Iron	98	99	75-125	1	20	0.178 J	0.170 J	5 (1)	20
Lead	103	103	75-125	1	20	N.D.	N.D.	0 (1)	20
Manganese	99	98	75-125	1	20	0.0182	0.0177	3 (1)	20
Sodium	99	101	75-125	1	20	3.90	3.96	2 (1)	20
Batch number: 13148987133A	Sample number(s): 7068424-7068428 UNSPK: P068380 BKG: P068380								
Chloride	117*		90-110			9.5	8.9	7 (1)	20
Sulfate	118*		90-110			5.4	4.9 J	10 (1)	20
Batch number: 13149113101A	Sample number(s): 7068424-7068428 UNSPK: P068158								
Phenols (water)	90	92	90-110	2	6				
Batch number: 13150049509A	Sample number(s): 7068430-7068439 UNSPK: 7068439 BKG: 7068439								
Total Organic Carbon	103		63-142			5.4	5.5	0	4
Batch number: 13150049509B	Sample number(s): 7068440-7068449 UNSPK: 7068449 BKG: 7068449								
Total Organic Carbon	101		63-142			6.8	6.9	1	4
Batch number: 13151102101A	Sample number(s): 7068424-7068428 UNSPK: P066046 BKG: P066046								
Total Cyanide (water)	91		90-110			N.D.	N.D.	0 (1)	20
Batch number: 13144807801A	Sample number(s): 7068424-7068428 UNSPK: P065272								
SGT-HEM (TPH)	49*		64-132						

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: EPA 624 water
Batch number: E131502AA

	1,2-Dichloroethane-d4	Fluorobenzene	4-Bromofluorobenzene
7068424	101	100	97
7068425	101	99	95
7068426	104	100	96
7068427	98	99	97
7068428	100	100	96
7068429	102	100	94
Blank	103	98	99

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Sunoco c/o Stantec Group Number: 1392212
Reported: 06/04/13 at 08:32 AM

Surrogate Quality Control

LCS	101	100	102
LCSD	101	100	102
Limits:	76-114	80-120	86-115

Analysis Name: SVOCs Method 625
Batch number: 13144WAD625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
7068424	98	94	104	42	66	79
7068425	104	89	110	47	76	76
7068426	90	91	104	44	63	71
7068427	87	91	110	54	82	67
7068428	95	90	111	49	70	86
Blank	90	100	104	36	57	106
LCS	89	91	101	43	66	90
LCSD	92	95	109	41	65	98
Limits:	59-126	69-121	42-126	10-84	10-114	36-140

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 11183 For Eurofins Lancaster Laboratories use only Group # 1392212 Sample # ~~7068424~~ 7068424-49
Instructions on reverse side correspond with circled numbers.
BK 5/23/13

COC # 328019

1 Client Information

Client: Stantec
Acct. #:
Project Name/#: Sunoco Marcus Hook RCRA
PWSID #:
Project Manager: Jennifer Menges
P.O. #:
Sampler: C. Correll
Quote #:
Name of state where samples were collected: PA

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

5 Analysis Requested — Preservation Codes: H, O, H, B/O, N, O, S

2 Sample Identification / **3 Collected**

Sample Identification	Date	Time	Grab	Composite	Total # of Containers	EPA 624 Water	625 Water Extraction	SGT-HEM (TPH)	Total Cyanides (TCN)	Metals/SW-846-6010B	Chloride/Sulfate 300.0	00434 Phenols (water)
MW40	5.22.13	1125	X		12	X	X	X	X	X	X	X
MW86	↓	0920	X		12	X	X	X	X	X	X	X
MW17		0940	X		12	X	X	X	X	X	X	X
MW28		1015	X		12	X	X	X	X	X	X	X
MW30		1050	X		12	X	X	X	X	X	X	X
Trip Blank					2	X						

For Lab Use Only
FSC:
SCR#:

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

6 Remarks
624: Benzene, Toluene, Ethyl Benzene, Total Xylenes
metals: Chromium, Lead, Iron, Manganese, Sodium
625: Acenaphthene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Bis(2-ethylhexyl) phthalate, Chrysene, Di-n-butyl phthalate, Fluorene, Naphthalene, Phenanthrene, Phenol

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

Date results are needed: ____

E-mail address: jennifer.menges@stantec.com

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

9

Relinquished by	Date	Time	Received by	Date	Time
Cory Correll	5/22/13	1237	Mark Denlinger	5/22/13	1237
Mark Denlinger	5/22/13	1445			

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 1.0-4.9 °C

Eurofins Lancaster Laboratories, Inc. • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300
The white copy should accompany samples to Eurofins Lancaster Laboratories. The yellow copy should be retained by the client.

Issued by Dept. 40 Management
7044.02

Environmental Analysis Request/Chain of Custody

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Acct. # 11183

For Eurofins Lancaster Laboratories use only
Group # 1392212 Sample # 7068424-49
Instructions on reverse side correspond with circled numbers.

COC # 328017

1 Client Information

Client: Stantec
Acct. #:
Project Name/#: Sunoco Marcus Hook RCRA
PWSID #:
Project Manager: Jennifer Menges
P.O. #:
Sampler: C. Correll
Quote #:
Name of state where samples were collected: PA

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

5 Analysis Requested

Preservation Codes: O | S/O

For Lab Use Only
FSC:
SCR#: 135761

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

6 Remarks

2 Sample Identification	Collected Date	Collected Time	3 Grab	Composite	Sediment	Soil	Ground	Potable	Surface	NPDES	Water	Other	Total # of Containers	SM20 5310C (TOC)	SW-846 9020B (TOX)	Remarks
MW40 A	5-21-13	0821	X								X		3	X	X	
MW40 B		0823	X								X		3	X	X	
MW40 C		0825	X								X		3	X	X	
MW40 D		0827	X								X		3	X	X	
MW86 A		0850	X								X		3	X	X	
MW86 B		0856	X								X		3	X	X	
MW86 C		0902	X								X		3	X	X	
MW86 D		0908	X								X		3	X	X	
MW17 A		1005	X								X		3	X	X	
MW17 B		1009	X								X		3	X	X	

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

Date results are needed: ____

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

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

9

Relinquished by	Date	Time	Received by	Date	Time
Beth Storer	3-5-13	810	Mark Denlinger	3-5-13	810
Mark Denlinger	3-5-13	1100	Cory Correll	3-5-13	1100
Cory Correll	5-23-13	1237	Mark Denlinger	5-23-13	1237
Mark Denlinger	5-23-13	1615			
			Received by	5/23/13	1615

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 4.9 °C

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories

Acct. # 11183

For Eurofins Lancaster Laboratories use only
Group # 1392212 Sample # 7068424-49
Instructions on reverse side correspond with circled numbers.

COC # 328018

1 Client Information

Client: Stantec
Acct. #:
Project Name/#: Sunoco Marcus Hook RCRA
PWSID #:
Project Manager: Jennifer Menges
P.O. #:
Sampler: C. Correll
Quote #:
Name of state where samples were collected: PA

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

5 Analysis Requested — Preservation Codes: O, S/O

For Lab Use Only
FSC:
SCR#:

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

6 Remarks

2 Sample Identification	Collected Date	Collected Time	3 Grab	Composite	Sediment	Water	Other	Total # of Containers	SM20 5310C (TOC)	SW-846 9020B (TOX)
MW17C	5-21-13	1013	X			X		3	X	X
MW17D		1017	X			X		3	X	X
MW28A		1133	X			X		3	X	X
MW28B		1135	X			X		3	X	X
MW28C		1137	X			X		3	X	X
MW28D		1139	X			X		3	X	X
MW30A		1237	X			X		3	X	X
MW30B		~~1224~~ 1239	X			X		3	X	X
MW30C		1241	X			X		3	X	X
MW30D		1243	X			X		3	X	X

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

Date results are needed: ____

E-mail address: Jennifer.Menges@Stantec.Com

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

9

Relinquished by	Date	Time	Received by	Date	Time
Cary Correll	5/23/13	1237	[illegible]	5/23/13	1237
[illegible]	5/23/13	1615			
			[illegible]	5/23/13	1615

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 1.1-4.9 °C

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 - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

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 of gas 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.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	**B**	Value is <CRDL, but ≥IDL
B	Analyte was also detected in the blank	**E**	Estimated due to interference
C	Pesticide result confirmed by GC/MS	**M**	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	**N**	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	**S**	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	**U**	Compound was not detected
P	Concentration difference between primary and confirmation columns >25%	**W**	Post digestion spike out of control limits
U	Compound was not detected	*****	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	**+**	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

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

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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

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