Analysis Report

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

ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 ExxonMobil c/o Arcadis 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

December 17, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 12/05/2013 Group Number: 1438737 SDG: PEM74 PO Number: B0086003.1301 State of Sample Origin: AR

Client Sample Description	Lancaster Labs (LL) #
WS-007(0.5-1.0)120313 Grab Surface Water	7302696
WS-009(Surface)120313 Grab Surface Water	7302697
WS-001(0.5-1.0)120313 Grab Surface Water	7302698
WS-021(Surface)120313 Grab Surface Water	7302699
WS-004(0.5-1.0)120313 Grab Surface Water	7302700
WS-020(Surface)120313 Grab Surface Water	7302701
WS-014(1.5-2.0)120413 Grab Surface Water	7302702
WS-014(5.5-6.0)120413 Grab Surface Water	7302703
WS-015(1.5-2.0)120413 Grab Surface Water	7302704
WS-015(3.5-4.0)120413 Grab Surface Water	7302705
WS-012(1.5-2.0)120413 Grab Surface Water	7302706
WS-012(5.0-5.5)120413 Grab Surface Water	7302707
WS-010(1.5-2.0)120413 Grab Surface Water	7302708
WS-010(3.5-4.0)120413 Grab Surface Water	7302709
WS-006(0.5-1.0)120413 Grab Surface Water	7302710
WS-006(0.5-1.0)120413MS Grab Surface Water	7302711
WS-006(0.5-1.0)120413MSD Grab Surface Water	7302712
WS-011(1.5-2.0)120413 Grab Surface Water	7302713
WS-011(5.0-5.5)120413 Grab Surface Water	7302714
WS-EB-117-120413 Grab Water	7302715
DUP-WS-115-120413 Grab Surface Water	7302716

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

ELECTRONIC ARCADIS Attn: Stephen Barrick

COPY TO

ELECTRONIC ARCADIS Attn: Lyndi Mott

Analysis Report

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ELECTRONIC ExxonMobil Attn: Michael J. Firth

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ELECTRONIC ARCADIS Attn: Emily Leamer

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ELECTRONIC ARCADIS Attn: Rhiannon Parmalee

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ELECTRONIC ExxonMobil Attn: Michael L Sixsmith

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ELECTRONIC ExxonMobil Attn: Julie Foster

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Respectfully Submitted,

Katherine A. Klinefelter Principal Specialist

Katherine a. Klinefelter

(717) 556-7256

Case Narrative

Project Name: Mayflower, AR Pipeline Incident LLI Group #: 1438737

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set

Matrix QC may not be reported if 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.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8270C SIM, GC/MS Semivolatiles

<u>Sample #s: 7302701</u>

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Batch #: 13340WAH026 (Sample number(s): 7302696-7302716 UNSPK: 7302710)

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7302701



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Sample Description: WS-007(0.5-1.0)120313 Grab Surface Water

LL Sample # WW 7302696 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/03/2013 12:20 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

03070 SDG#: PEM74-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a) anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b) fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	0.061	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	03:39	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



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Sample Description: WS-009(Surface)120313 Grab Surface Water

LL Sample # WW 7302697 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/03/2013 12:30 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

0309S SDG#: PEM74-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.056	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.056	1
08357	Anthracene	120-12-7	N.D.	0.011	0.056	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.056	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.056	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.056	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.056	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.056	1
08357	Chrysene	218-01-9	N.D.	0.011	0.056	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.056	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.056	1
08357	Fluorene	86-73-7	N.D.	0.011	0.056	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.056	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.056	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.056	1
08357	Naphthalene	91-20-3	0.074	0.033	0.056	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.056	1
08357	Pyrene	129-00-0	N.D.	0.011	0.056	1

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	04:06	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



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Sample Description: WS-001(0.5-1.0)120313 Grab Surface Water

LL Sample # WW 7302698 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/03/2013 12:40 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

03010 SDG#: PEM74-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.055	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.055	1
08357	Anthracene	120-12-7	N.D.	0.011	0.055	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.055	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.055	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.055	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.055	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.055	1
08357	Chrysene	218-01-9	N.D.	0.011	0.055	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.055	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.055	1
08357	Fluorene	86-73-7	N.D.	0.011	0.055	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.055	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.055	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.055	1
08357	Naphthalene	91-20-3	0.069	0.033	0.055	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.055	1
08357	Pyrene	129-00-0	N.D.	0.011	0.055	1

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	04:33	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



Analysis Report

LL Sample # WW 7302699

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Sample Description: WS-021(Surface)120313 Grab Surface Water

Mayflower, AR LL Group # 1438737
Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/03/2013 13:00 by RL ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

0321S SDG#: PEM74-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	0.050 J	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	05:01	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



Analysis Report

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Sample Description: WS-004(0.5-1.0)120313 Grab Surface Water

LL Sample # WW 7302700 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/03/2013 12:50 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

03040 SDG#: PEM74-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	0.16	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	.me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	05:28	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



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Sample Description: WS-020(Surface)120313 Grab Surface Water

LL Sample # WW 7302701 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/03/2013 13:20 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

0320S SDG#: PEM74-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.050	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.050	1
08357	Anthracene	120-12-7	N.D.	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.050	1
08357	Benzo(b) fluoranthene	205-99-2	N.D.	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.050	1
08357	Chrysene	218-01-9	N.D.	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.050	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.050	1
08357	Fluorene	86-73-7	N.D.	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.050	1
08357	Naphthalene	91-20-3	0.062	0.030	0.050	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.050	1
08357	Pyrene	129-00-0	N.D.	0.010	0.050	1
acce	recovery for the sample surrog ptance limits as noted on the acted and the data reported.					

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tim	ne	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	05:55	Brian K Graham	1
10470	BNA Water Extraction (STM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



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Sample Description: WS-014(1.5-2.0)120413 Grab Surface Water

LL Sample # WW 7302702 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/04/2013 12:10 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

04141 SDG#: PEM74-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.012	0.058	1
08357	Acenaphthylene	208-96-8	N.D.	0.012	0.058	1
08357	Anthracene	120-12-7	N.D.	0.012	0.058	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.012	0.058	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.012	0.058	1
08357	Benzo(b) fluoranthene	205-99-2	N.D.	0.012	0.058	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.012	0.058	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.012	0.058	1
08357	Chrysene	218-01-9	N.D.	0.012	0.058	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.012	0.058	1
08357	Fluoranthene	206-44-0	N.D.	0.012	0.058	1
08357	Fluorene	86-73-7	N.D.	0.012	0.058	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.012	0.058	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.012	0.058	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.012	0.058	1
08357	Naphthalene	91-20-3	0.044 J	0.035	0.058	1
08357	Phenanthrene	85-01-8	N.D.	0.035	0.058	1
08357	Pyrene	129-00-0	N.D.	0.012	0.058	1

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	06:22	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



Analysis Report

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

Sample Description: WS-014(5.5-6.0)120413 Grab Surface Water

LL Sample # WW 7302703 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/04/2013 12:20 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

04145 SDG#: PEM74-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.012	0.058	1
08357	Acenaphthylene	208-96-8	N.D.	0.012	0.058	1
08357	Anthracene	120-12-7	N.D.	0.012	0.058	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.012	0.058	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.012	0.058	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.012	0.058	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.012	0.058	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.012	0.058	1
08357	Chrysene	218-01-9	N.D.	0.012	0.058	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.012	0.058	1
08357	Fluoranthene	206-44-0	N.D.	0.012	0.058	1
08357	Fluorene	86-73-7	N.D.	0.012	0.058	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.012	0.058	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.012	0.058	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.012	0.058	1
08357	Naphthalene	91-20-3	0.049 J	0.035	0.058	1
08357	Phenanthrene	85-01-8	N.D.	0.035	0.058	1
08357	Pyrene	129-00-0	N.D.	0.012	0.058	1

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	06:49	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



Analysis Report

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

Sample Description: WS-015(1.5-2.0)120413 Grab Surface Water

LL Sample # WW 7302704 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/04/2013 12:25 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

04151 SDG#: PEM74-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.013	0.064	1
08357	Acenaphthylene	208-96-8	N.D.	0.013	0.064	1
08357	Anthracene	120-12-7	N.D.	0.013	0.064	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.013	0.064	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.013	0.064	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.013	0.064	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.013	0.064	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.013	0.064	1
08357	Chrysene	218-01-9	N.D.	0.013	0.064	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.013	0.064	1
08357	Fluoranthene	206-44-0	N.D.	0.013	0.064	1
08357	Fluorene	86-73-7	N.D.	0.013	0.064	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.013	0.064	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.013	0.064	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.013	0.064	1
08357	Naphthalene	91-20-3	0.045 J	0.039	0.064	1
08357	Phenanthrene	85-01-8	N.D.	0.039	0.064	1
08357	Pyrene	129-00-0	N.D.	0.013	0.064	1

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	07:16	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



Analysis Report

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

Sample Description: WS-015(3.5-4.0)120413 Grab Surface Water

LL Sample # WW 7302705 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/04/2013 12:35 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

04153 SDG#: PEM74-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.012	0.058	1
08357	Acenaphthylene	208-96-8	N.D.	0.012	0.058	1
08357	Anthracene	120-12-7	N.D.	0.012	0.058	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.012	0.058	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.012	0.058	1
08357	Benzo(b) fluoranthene	205-99-2	N.D.	0.012	0.058	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.012	0.058	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.012	0.058	1
08357	Chrysene	218-01-9	N.D.	0.012	0.058	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.012	0.058	1
08357	Fluoranthene	206-44-0	N.D.	0.012	0.058	1
08357	Fluorene	86-73-7	N.D.	0.012	0.058	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.012	0.058	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.012	0.058	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.012	0.058	1
08357	Naphthalene	91-20-3	0.051 J	0.035	0.058	1
08357	Phenanthrene	85-01-8	N.D.	0.035	0.058	1
08357	Pyrene	129-00-0	N.D.	0.012	0.058	1

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	07:44	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



Analysis Report

LL Sample # WW 7302706

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

Sample Description: WS-012(1.5-2.0)120413 Grab Surface Water

Mayflower, AR LL Group # 1438737
Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/04/2013 12:40 by RL ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

04121 SDG#: PEM74-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.056	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.056	1
08357	Anthracene	120-12-7	N.D.	0.011	0.056	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.056	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.056	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.056	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.056	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.056	1
08357	Chrysene	218-01-9	N.D.	0.011	0.056	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.056	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.056	1
08357	Fluorene	86-73-7	N.D.	0.011	0.056	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.056	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.056	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.056	1
08357	Naphthalene	91-20-3	0.057	0.034	0.056	1
08357	Phenanthrene	85-01-8	N.D.	0.034	0.056	1
08357	Pyrene	129-00-0	N.D.	0.011	0.056	1

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	08:11	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



Analysis Report

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

Sample Description: WS-012(5.0-5.5)120413 Grab Surface Water

LL Sample # WW 7302707 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/04/2013 12:50 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

04123 SDG#: PEM74-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.012	0.058	1
08357	Acenaphthylene	208-96-8	N.D.	0.012	0.058	1
08357	Anthracene	120-12-7	N.D.	0.012	0.058	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.012	0.058	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.012	0.058	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.012	0.058	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.012	0.058	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.012	0.058	1
08357	Chrysene	218-01-9	N.D.	0.012	0.058	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.012	0.058	1
08357	Fluoranthene	206-44-0	N.D.	0.012	0.058	1
08357	Fluorene	86-73-7	N.D.	0.012	0.058	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.012	0.058	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.012	0.058	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.012	0.058	1
08357	Naphthalene	91-20-3	0.059	0.035	0.058	1
08357	Phenanthrene	85-01-8	N.D.	0.035	0.058	1
08357	Pyrene	129-00-0	N.D.	0.012	0.058	1

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	08:38	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



Analysis Report

LL Sample # WW 7302708

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

Sample Description: WS-010(1.5-2.0)120413 Grab Surface Water

Mayflower, AR LL Group # 1438737
Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/04/2013 13:00 by RL ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

04101 SDG#: PEM74-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.056	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.056	1
08357	Anthracene	120-12-7	N.D.	0.011	0.056	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.056	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.056	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.056	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.056	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.056	1
08357	Chrysene	218-01-9	N.D.	0.011	0.056	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.056	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.056	1
08357	Fluorene	86-73-7	N.D.	0.011	0.056	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.056	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.056	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.056	1
08357	Naphthalene	91-20-3	0.061	0.033	0.056	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.056	1
08357	Pyrene	129-00-0	N.D.	0.011	0.056	1

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	09:05	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



Analysis Report

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

Sample Description: WS-010(3.5-4.0)120413 Grab Surface Water

LL Sample # WW 7302709 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/04/2013 13:10 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

04103 SDG#: PEM74-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.057	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.057	1
08357	Anthracene	120-12-7	N.D.	0.011	0.057	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.057	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.057	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.057	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.057	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.057	1
08357	Chrysene	218-01-9	N.D.	0.011	0.057	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.057	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.057	1
08357	Fluorene	86-73-7	N.D.	0.011	0.057	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.057	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.057	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.057	1
08357	Naphthalene	91-20-3	0.037 J	0.034	0.057	1
08357	Phenanthrene	85-01-8	N.D.	0.034	0.057	1
08357	Pyrene	129-00-0	N.D.	0.011	0.057	1

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	09:32	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



Analysis Report

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

Sample Description: WS-006(0.5-1.0)120413 Grab Surface Water

LL Sample # WW 7302710 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/04/2013 13:15 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

04060 SDG#: PEM74-15BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.056	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.056	1
08357	Anthracene	120-12-7	N.D.	0.011	0.056	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.056	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.056	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.056	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.056	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.056	1
08357	Chrysene	218-01-9	N.D.	0.011	0.056	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.056	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.056	1
08357	Fluorene	86-73-7	N.D.	0.011	0.056	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.056	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.056	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.056	1
08357	Naphthalene	91-20-3	0.043 J	0.033	0.056	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.056	1
08357	Pyrene	129-00-0	N.D.	0.011	0.056	1

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	.me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	02:18	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



Analysis Report

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

Sample Description: WS-006(0.5-1.0)120413MS Grab Surface Water

LL Sample # WW 7302711 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/04/2013 13:15 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

04060 SDG#: PEM74-15MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	1.0	0.010	0.051	1
08357	Acenaphthylene	208-96-8	1.1	0.010	0.051	1
08357	Anthracene	120-12-7	0.87	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.92	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.72	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.92	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.77	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.96	0.010	0.051	1
08357	Chrysene	218-01-9	0.91	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	0.82	0.010	0.051	1
08357	Fluoranthene	206-44-0	1.0	0.010	0.051	1
08357	Fluorene	86-73-7	1.0	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.85	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	1.0	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	1.0	0.010	0.051	1
08357	Naphthalene	91-20-3	1.1	0.030	0.051	1
08357	Phenanthrene	85-01-8	1.0	0.030	0.051	1
08357	Pyrene	129-00-0	0.96	0.010	0.051	1

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	02:45	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



Analysis Report

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

Sample Description: WS-006(0.5-1.0)120413MSD Grab Surface Water

LL Sample # WW 7302712 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/04/2013 13:15 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

04060 SDG#: PEM74-15MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	1.1	0.011	0.056	1
08357	Acenaphthylene	208-96-8	1.2	0.011	0.056	1
08357	Anthracene	120-12-7	0.94	0.011	0.056	1
08357	Benzo(a)anthracene	56-55-3	1.0	0.011	0.056	1
08357	Benzo(a)pyrene	50-32-8	0.78	0.011	0.056	1
08357	Benzo(b)fluoranthene	205-99-2	1.0	0.011	0.056	1
08357	Benzo(g,h,i)perylene	191-24-2	0.83	0.011	0.056	1
08357	Benzo(k)fluoranthene	207-08-9	1.0	0.011	0.056	1
08357	Chrysene	218-01-9	0.97	0.011	0.056	1
08357	Dibenz(a,h)anthracene	53-70-3	0.90	0.011	0.056	1
08357	Fluoranthene	206-44-0	1.1	0.011	0.056	1
08357	Fluorene	86-73-7	1.1	0.011	0.056	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.93	0.011	0.056	1
08357	1-Methylnaphthalene	90-12-0	1.2	0.011	0.056	1
08357	2-Methylnaphthalene	91-57-6	1.1	0.011	0.056	1
08357	Naphthalene	91-20-3	1.2	0.033	0.056	1
08357	Phenanthrene	85-01-8	1.1	0.033	0.056	1
08357	Pyrene	129-00-0	1.1	0.011	0.056	1

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	03:12	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



Analysis Report

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

Sample Description: WS-011(1.5-2.0)120413 Grab Surface Water

LL Sample # WW 7302713 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/04/2013 13:40 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

04111 SDG#: PEM74-16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.057	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.057	1
08357	Anthracene	120-12-7	N.D.	0.011	0.057	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.057	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.057	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.057	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.057	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.057	1
08357	Chrysene	218-01-9	N.D.	0.011	0.057	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.057	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.057	1
08357	Fluorene	86-73-7	N.D.	0.011	0.057	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.057	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.057	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.057	1
08357	Naphthalene	91-20-3	0.059	0.034	0.057	1
08357	Phenanthrene	85-01-8	N.D.	0.034	0.057	1
08357	Pyrene	129-00-0	N.D.	0.011	0.057	1

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	09:59	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1



Analysis Report

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

Sample Description: WS-011(5.0-5.5)120413 Grab Surface Water

LL Sample # WW 7302714 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/04/2013 13:50 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

04115 SDG#: PEM74-17

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.054	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.054	1
08357	Anthracene	120-12-7	N.D.	0.011	0.054	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.054	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.054	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.054	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.054	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.054	1
08357	Chrysene	218-01-9	N.D.	0.011	0.054	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.054	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.054	1
08357	Fluorene	86-73-7	N.D.	0.011	0.054	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.054	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.054	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.054	1
08357	Naphthalene	91-20-3	0.059	0.033	0.054	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.054	1
08357	Pyrene	129-00-0	N.D.	0.011	0.054	1

General Sample Comments

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

CAT No.	Analysis Name Method		Trial#	Batch#	Analysis Date and Time	.e	Analyst	Dilution Factor	
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013	10:26	Brian K Graham	1	
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013	13:30	Anna E Stager	1	



Analysis Report

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

Sample Description: WS-EB-117-120413 Grab Water

LL Sample # WW 7302715 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/04/2013 15:00 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

EB117 SDG#: PEM74-18EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.056	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.056	1
08357	Anthracene	120-12-7	N.D.	0.011	0.056	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.056	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.056	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.056	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.056	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.056	1
08357	Chrysene	218-01-9	N.D.	0.011	0.056	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.056	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.056	1
08357	Fluorene	86-73-7	N.D.	0.011	0.056	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.056	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.056	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.056	1
08357	Naphthalene	91-20-3	N.D.	0.033	0.056	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.056	1
08357	Pyrene	129-00-0	N.D.	0.011	0.056	1

General Sample Comments

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

CAT No.	Analysis Name Method		Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor	
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013 10	0:54	Brian K Graham	1	
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013 13	3:30	Anna E Stager	1	



Analysis Report

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Sample Description: DUP-WS-115-120413 Grab Surface Water

LL Sample # WW 7302716 Mayflower, AR LL Group # 1438737 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 12/04/2013 by RL ExxonMobil c/o Arcadis

> 630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Submitted: 12/05/2013 09:15 Reported: 12/17/2013 12:01

DP115 SDG#: PEM74-19FD*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.057	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.057	1
08357	Anthracene	120-12-7	N.D.	0.011	0.057	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.057	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.057	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.057	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.057	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.057	1
08357	Chrysene	218-01-9	N.D.	0.011	0.057	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.057	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.057	1
08357	Fluorene	86-73-7	N.D.	0.011	0.057	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.057	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.057	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.057	1
08357	Naphthalene	91-20-3	0.053 J	0.034	0.057	1
08357	Phenanthrene	85-01-8	N.D.	0.034	0.057	1
08357	Pyrene	129-00-0	N.D.	0.011	0.057	1

General Sample Comments

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

CAT No.	Analysis Name Method		Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13340WAH026	12/09/2013 11:23	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13340WAH026	12/08/2013 13:30	Anna E Stager	1



Analysis Report

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Quality Control Summary

Client Name: ExxonMobil c/o Arcadis Group Number: 1438737

Reported: 12/17/13 at 12:01 PM

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 <u>Result</u>	Blank MDL**	Blank <u>LOQ</u>	Report <u>Units</u>	LCS %REC	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD Max
Batch number: 13340WAH026	Sample num	ber(s): 73	302696-730	2716					
Acenaphthene	N.D.	0.010	0.050	ug/l	99		77-118		
Acenaphthylene	N.D.	0.010	0.050	ug/l	106		80-123		
Anthracene	N.D.	0.010	0.050	ug/l	102		78-123		
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	94		73-127		
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	93		72-120		
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	104		79-136		
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	79		64-130		
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	104		73-131		
Chrysene	N.D.	0.010	0.050	ug/l	97		76-125		
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	77		58-131		
Fluoranthene	N.D.	0.010	0.050	ug/l	101		79-124		
Fluorene	N.D.	0.010	0.050	ug/l	98		74-115		
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	84		62-130		
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	101		80-126		
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	100		81-124		
Naphthalene	N.D.	0.030	0.050	ug/l	102		75-120		
Phenanthrene	N.D.	0.030	0.050	ug/l	101		75-120		
Pyrene	N.D.	0.010	0.050	ug/l	96		71-130		

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 <u>Limits</u>	RPD	RPD <u>MAX</u>	BKG Conc	DUP Conc	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: 13340WAH026	Sample	number(s)	: 7302696	-73027	16 UNSP	K: 7302710			
Acenaphthene	100	99	47-136	8	30				
Acenaphthylene	108	107	33-146	8	30				
Anthracene	86	85	69-119	8	30				
Benzo(a)anthracene	91	92	37-150	10	30				
Benzo(a)pyrene	71	70	64-123	7	30				
Benzo(b)fluoranthene	91	90	33-152	8	30				
Benzo(g,h,i)perylene	76	75	36-138	7	30				
Benzo(k)fluoranthene	95	90	31-142	5	30				
Chrysene	90	87	34-135	7	30				
Dibenz(a,h)anthracene	81	81	17-134	9	30				
Fluoranthene	100	102	39-147	11	30				
Fluorene	100	100	38-149	10	30				
Indeno(1,2,3-cd)pyrene	84	83	29-143	9	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.

Analysis Report

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Quality Control Summary

Client Name: ExxonMobil c/o Arcadis Group Number: 1438737

Reported: 12/17/13 at 12:01 PM

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

	MS	MSD	MS/MSD		RPD	BKG	DUP	DUP	Dup RPD
<u>Analysis Name</u>	%REC	%REC	<u>Limits</u>	RPD	<u>MAX</u>	Conc	Conc	RPD	Max
1-Methylnaphthalene	104	104	49-152	9	30				
2-Methylnaphthalene	101	102	51-146	10	30				
Naphthalene	103	105	58-131	11	30				
Phenanthrene	102	103	48-140	11	30				
Pyrene	94	96	59-125	11	30				

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: PAHs in waters by SIM

Batch number: 13340WAH026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene- d10
7302696	93	73	96
7302697	98	76	96
7302698	98	83	98
7302699	101	82	100
7302700	80	70	89
7302701	89	59*	93
7302702	97	75	97
7302703	96	75	97
7302704	96	83	94
7302705	99	86	97
7302706	96	82	95
7302707	96	81	93
7302708	100	82	98
7302709	91	76	84
7302710	91	72	92
7302711	98	87	101
7302712	100	83	102
7302713	96	73	96
7302714	99	80	100
7302715	95	89	95
7302716	94	62	96
Blank	91	88	92
LCS	94	91	99
MS	98	87	101
MSD	100	83	102
Limits:	44-137	62-141	51-136

^{*-} 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.

ExxonMobil Analysis Request/Chain of Custody

⇔ eurofins	Lancaster Laboratori Environmental		Acct. # <u>[</u> 47	139	For Eurofi Group #	ins La # struction	ancas <u>∤ 38</u> ns on re	ter Labor 737 verse side	ratories l San	Environ nple # _ with circle	mental 7 2 ed numbe	use on	186-1	'6			f	-7
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ExxonMobil Analysis Request/Chain of Custody

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Environmental Sample Administration 1438737 **Receipt Documentation Log**

Client/	Project: 🖹	ON MOB!		Shippin	g Containe	er Sealed: (YE	S NO					
Date o	f Receipt: 👤	2513		Custody Seal Present * : YES NO								
Time o	f Receipt: 9	15		* Custody seal was intact unless otherwise noted in the								
Source	Code:	30-1		discrepancy section Package: Chilled Not Chil								
<u></u>			and the state of t									
	T	_	Temperature of	Shipping Contai			4p-001-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-					
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments					
1	DTIZI	1	TB	WI	Y	B						
2	1	0.8	V	V	\downarrow	\downarrow						
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4												
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6												
Number of Trip Blanks received <u>NOT</u> listed on chain of custody: Paperwork Discrepancy/Unpacking Problems:												
Unpacker Signature/Emp#: 738 Date/Time: 12/5/13 17/2												



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)
С	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)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

- < less than The number following the sign is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.
- > 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 weightbasis
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.

Data Qualifiers:

C - result confirmed by reanalysis.

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

U.S. EPA CLP Data Qualifiers:

	Organic Qualifiers		Inorganic Qualifiers
Α	TIC is a possible aldol-condensation product	В	Value is <crdl, but="" th="" ≥idl<=""></crdl,>
В	Analyte was also detected in the blank	E	Estimated due to interference
С	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	S	Method of standard additions (MSA) used
	the instrument		for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
Р	Concentration difference between primary and	W	Post digestion spike out of control limits
	confirmation columns >25%	*	Duplicate analysis not within control limits
U	Compound was not detected	+	Correlation coefficient for MSA < 0.995
X,Y,Z	Defined in case narrative		

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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