

## ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

November 21, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 11/08/2013

Group Number: 1432498

SDG: PEM61

PO Number: B0086003.1301

State of Sample Origin: AR

Client Sample DescriptionLancaster Labs (LL) #

WS-008(Surface)110613 Grab Surface Water	7269588
WS-015(1.5-2.0)110613 Grab Surface Water	7269589
WS-015(3.5-4.0)110613 Grab Surface Water	7269590
WS-021(Surface)110613 Grab Surface Water	7269591
WS-009(Surface)110613 Grab Surface Water	7269592
WS-004(0.5-1.0)110613 Grab Surface Water	7269593
WS-EB-109-110613 Grab Water	7269594
WS-014(1.5-2.0)110713 Grab Surface Water	7269595
WS-014(5.5-6.0)110713 Grab Surface Water	7269596
WS-012(1.5-2.0)110713 Grab Surface Water	7269597
WS-012(5.0-5.5)110713 Grab Surface Water	7269598
WS-010(1.5-2.0)110713 Grab Surface Water	7269599
WS-010(3.5-4.0)110713 Grab Surface Water	7269600
WS-006(0.5-1.0)110713 Grab Surface Water	7269601
WS-006(0.5-1.0)110713MS Grab Surface Water	7269602
WS-006(0.5-1.0)110713MSD Grab Surface Water	7269603
WS-011(1.5-2.0)110713 Grab Surface Water	7269604
WS-011(5.0-5.5)110713 Grab Surface Water	7269605
WS-020(Surface)110713 Grab Surface Water	7269606
WS-007(0.5-1.0)110713 Grab Surface Water	7269607
WS-001(0.5-1.0)110713 Grab Surface Water	7269608
WS-EB-110-110713 Grab Water	7269609
DUP-WS-111-110713 Grab Surface Water	7269610

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
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ELECTRONIC	ExxonMobil	Attn: Michael J. Firth
COPY TO		
ELECTRONIC	ARCADIS	Attn: Emily Leamer
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ELECTRONIC	ARCADIS	Attn: Rhiannon Parmalee
COPY TO		
ELECTRONIC	ExxonMobil	Attn: Michael L Sixsmith
COPY TO		
ELECTRONIC	ExxonMobil	Attn: Julie Foster
COPY TO		

Respectfully Submitted,



Katherine A. Klinefelter  
Principal Specialist

(717) 556-7256

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Project Name: Mayflower, AR Pipeline Incident  
LLI Group #: 1432498

**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**

Sample #s: 7269588, 7269589, 7269590, 7269591, 7269592, 7269594

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

Sample #s: 7269593

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis. 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 #: 13313WAC026 (Sample number(s): 7269588-7269594)

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7269593

Sample Description: WS-008(Surface)110613 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269588  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/06/2013 09:10 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

06008 SDG#: PEM61-01

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.	0.013	0.063	1
08357	Acenaphthylene	208-96-8	N.D.	0.013	0.063	1
08357	Anthracene	120-12-7	N.D.	0.013	0.063	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.013	0.063	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.013	0.063	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.013	0.063	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.013	0.063	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.013	0.063	1
08357	Chrysene	218-01-9	N.D.	0.013	0.063	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.013	0.063	1
08357	Fluoranthene	206-44-0	N.D.	0.013	0.063	1
08357	Fluorene	86-73-7	N.D.	0.013	0.063	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.013	0.063	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.013	0.063	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.013	0.063	1
08357	Naphthalene	91-20-3	N.D.	0.038	0.063	1
08357	Phenanthrene	85-01-8	N.D.	0.038	0.063	1
08357	Pyrene	129-00-0	N.D.	0.013	0.063	1

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

## 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.

## Laboratory Sample Analysis Record

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	13313WAC026	11/15/2013 08:36	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13313WAC026	11/10/2013 05:30	Nicholas W Shroyer	1

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

Sample Description: WS-015(1.5-2.0)110613 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269589  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/06/2013 10:00 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

06151 SDG#: PEM61-02

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.	0.010	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	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

## 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.

## Laboratory Sample Analysis Record

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	13313WAC026	11/15/2013 09:06	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13313WAC026	11/10/2013 05:30	Nicholas W Shroyer	1

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

Sample Description: WS-015(3.5-4.0)110613 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269590  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/06/2013 10:10 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

06152 SDG#: PEM61-03

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.	0.010	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	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

## 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.

## Laboratory Sample Analysis Record

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	13313WAC026	11/15/2013 09:35	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13313WAC026	11/10/2013 05:30	Nicholas W Shroyer	1

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

Sample Description: WS-021(Surface)110613 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269591  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/06/2013 11:30 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

06021 SDG#: PEM61-04

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	0.055	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	N.D.	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

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

## 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.

## Laboratory Sample Analysis Record

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	13313WAC026	11/15/2013 10:04	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13313WAC026	11/10/2013 05:30	Nicholas W Shroyer	1

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

Sample Description: WS-009(Surface)110613 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269592  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/06/2013 11:40 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

06009 SDG#: PEM61-05

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.	0.012	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	N.D.	0.035	0.058	1
08357	Phenanthrene	85-01-8	N.D.	0.035	0.058	1
08357	Pyrene	129-00-0	0.064	0.012	0.058	1

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

## 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.

## Laboratory Sample Analysis Record

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	13313WAC026	11/15/2013 10:34	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13313WAC026	11/10/2013 05:30	Nicholas W Shroyer	1

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

Sample Description: WS-004(0.5-1.0)110613 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269593  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/06/2013 11:50 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

06004 SDG#: PEM61-06

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	N.D.	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

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

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.

## 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.

## Laboratory Sample Analysis Record

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	13313WAC026	11/15/2013 11:03	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13313WAC026	11/10/2013 05:30	Nicholas W Shroyer	1

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

Sample Description: WS-EB-109-110613 Grab Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269594  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/06/2013 12:20 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

06109 SDG#: PEM61-07EB

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	N.D.	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

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

## 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.

## Laboratory Sample Analysis Record

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	13313WAC026	11/15/2013 11:32	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13313WAC026	11/10/2013 05:30	Nicholas W Shroyer	1

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

Sample Description: WS-014(1.5-2.0)110713 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269595  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/07/2013 08:50 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

07141 SDG#: PEM61-08

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.	0.011	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	0.011 J	0.011	0.055	1
08357	Naphthalene	91-20-3	N.D.	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.

## Laboratory Sample Analysis Record

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	13314WAC026	11/14/2013 09:10	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13314WAC026	11/11/2013 21:00	Nicholas W Shroyer	1

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

Sample Description: WS-014(5.5-6.0)110713 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269596  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/07/2013 09:00 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

07142 SDG#: PEM61-09

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.	0.011	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	0.011 J	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	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.

## Laboratory Sample Analysis Record

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	13314WAC026	11/14/2013 09:39	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13314WAC026	11/11/2013 21:00	Nicholas W Shroyer	1

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

Sample Description: WS-012(1.5-2.0)110713 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269597  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/07/2013 09:10 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

07121 SDG#: PEM61-10

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.	0.011	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	N.D.	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.

## Laboratory Sample Analysis Record

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	13314WAC026	11/14/2013 10:09	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13314WAC026	11/11/2013 21:00	Nicholas W Shroyer	1

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

Sample Description: WS-012(5.0-5.5)110713 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269598  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/07/2013 09:20 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

07122 SDG#: PEM61-11

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.	0.010	0.052	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.052	1
08357	Anthracene	120-12-7	N.D.	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.052	1
08357	Chrysene	218-01-9	N.D.	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.052	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.052	1
08357	Fluorene	86-73-7	N.D.	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	0.011 J	0.010	0.052	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.052	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.052	1
08357	Pyrene	129-00-0	N.D.	0.010	0.052	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.

## Laboratory Sample Analysis Record

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	13314WAC026	11/14/2013 10:38	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13314WAC026	11/11/2013 21:00	Nicholas W Shroyer	1

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

**Sample Description:** WS-010(1.5-2.0)110713 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269599  
LL Group # 1432498  
Account # 14739

**Project Name:** Mayflower, AR Pipeline Incident

Collected: 11/07/2013 09:30 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

07101 SDG#: PEM61-12

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.	0.010	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	N.D.	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

## 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.

## Laboratory Sample Analysis Record

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	13314WAC026	11/14/2013 11:07	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13314WAC026	11/11/2013 21:00	Nicholas W Shroyer	1

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

Sample Description: WS-010(3.5-4.0)110713 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269600  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/07/2013 09:40 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

07102 SDG#: PEM61-13

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.	0.010	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	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	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.

## Laboratory Sample Analysis Record

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	13314WAC026	11/14/2013 11:36	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13314WAC026	11/11/2013 21:00	Nicholas W Shroyer	1

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

**Sample Description:** WS-006(0.5-1.0)110713 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269601  
LL Group # 1432498  
Account # 14739

**Project Name:** Mayflower, AR Pipeline Incident

Collected: 11/07/2013 09:50 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

07006 SDG#: PEM61-14BKG

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	0.052	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.052	1
08357	Anthracene	120-12-7	N.D.	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.052	1
08357	Chrysene	218-01-9	N.D.	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.052	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.052	1
08357	Fluorene	86-73-7	N.D.	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.052	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.052	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.052	1
08357	Pyrene	129-00-0	N.D.	0.010	0.052	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.

## Laboratory Sample Analysis Record

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	13314WAC026	11/14/2013 05:18	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13314WAC026	11/11/2013 21:00	Nicholas W Shroyer	1

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

Sample Description: WS-006(0.5-1.0)110713MS Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269602  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/07/2013 09:50 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

07006 SDG#: PEM61-14MS

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	0.010	0.052	1
08357	Acenaphthylene	208-96-8	1.2	0.010	0.052	1
08357	Anthracene	120-12-7	0.96	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	1.0	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	0.73	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	1.0	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	1.0	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	0.96	0.010	0.052	1
08357	Chrysene	218-01-9	0.96	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	1.0	0.010	0.052	1
08357	Fluoranthene	206-44-0	0.96	0.010	0.052	1
08357	Fluorene	86-73-7	1.1	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.99	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	1.2	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	1.2	0.010	0.052	1
08357	Naphthalene	91-20-3	1.1	0.031	0.052	1
08357	Phenanthrene	85-01-8	1.1	0.031	0.052	1
08357	Pyrene	129-00-0	1.0	0.010	0.052	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.

## Laboratory Sample Analysis Record

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	13314WAC026	11/14/2013 05:47	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13314WAC026	11/11/2013 21:00	Nicholas W Shroyer	1

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

Sample Description: WS-006(0.5-1.0)110713MSD Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269603  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/07/2013 09:50 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

07006 SDG#: PEM61-14MSD

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	0.010	0.052	1
08357	Acenaphthylene	208-96-8	1.1	0.010	0.052	1
08357	Anthracene	120-12-7	0.99	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	1.0	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	0.73	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	1.0	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	0.96	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	0.96	0.010	0.052	1
08357	Chrysene	218-01-9	0.97	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	0.97	0.010	0.052	1
08357	Fluoranthene	206-44-0	1.0	0.010	0.052	1
08357	Fluorene	86-73-7	1.1	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.95	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	1.3	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	1.2	0.010	0.052	1
08357	Naphthalene	91-20-3	1.1	0.031	0.052	1
08357	Phenanthrene	85-01-8	1.1	0.031	0.052	1
08357	Pyrene	129-00-0	1.0	0.010	0.052	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.

## Laboratory Sample Analysis Record

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	13314WAC026	11/14/2013 06:16	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13314WAC026	11/11/2013 21:00	Nicholas W Shroyer	1

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

Sample Description: WS-011(1.5-2.0)110713 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269604  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/07/2013 10:40 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

07111 SDG#: PEM61-15

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	N.D.	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

## 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.

## Laboratory Sample Analysis Record

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	13314WAC026	11/14/2013 12:05	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13314WAC026	11/11/2013 21:00	Nicholas W Shroyer	1

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

**Sample Description:** WS-011(5.0-5.5)110713 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269605  
LL Group # 1432498  
Account # 14739

**Project Name:** Mayflower, AR Pipeline Incident

Collected: 11/07/2013 10:50 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

07112 SDG#: PEM61-16

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.	0.010	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	N.D.	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

## 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.

## Laboratory Sample Analysis Record

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	13314WAC026	11/14/2013 12:34	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13314WAC026	11/11/2013 21:00	Nicholas W Shroyer	1

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

Sample Description: WS-020(Surface)110713 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269606  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/07/2013 11:50 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

07020 SDG#: PEM61-17

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	0.053	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	0.013 J	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	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.

## Laboratory Sample Analysis Record

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	13314WAC026	11/15/2013 14:56	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13314WAC026	11/11/2013 21:00	Nicholas W Shroyer	1

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

Sample Description: WS-007(0.5-1.0)110713 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269607  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/07/2013 12:10 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

07007 SDG#: PEM61-18

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.

## Laboratory Sample Analysis Record

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	13314WAC026	11/16/2013 08:49	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13314WAC026	11/11/2013 21:00	Nicholas W Shroyer	1

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

Sample Description: WS-001(0.5-1.0)110713 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269608  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/07/2013 12:20 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

07001 SDG#: PEM61-19

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	0.052	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.052	1
08357	Anthracene	120-12-7	N.D.	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.052	1
08357	Chrysene	218-01-9	N.D.	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.052	1
08357	Fluoranthene	206-44-0	0.011 J	0.010	0.052	1
08357	Fluorene	86-73-7	N.D.	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	0.012 J	0.010	0.052	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.052	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.052	1
08357	Pyrene	129-00-0	0.011 J	0.010	0.052	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.

## Laboratory Sample Analysis Record

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	13314WAC026	11/16/2013 09:18	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13314WAC026	11/11/2013 21:00	Nicholas W Shroyer	1

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

Sample Description: WS-EB-110-110713 Grab Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269609  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/07/2013 12:30 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

07110 SDG#: PEM61-20EB

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	0.011 J	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	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.

## Laboratory Sample Analysis Record

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	13314WAC026	11/16/2013 09:47	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13314WAC026	11/11/2013 21:00	Nicholas W Shroyer	1

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

Sample Description: DUP-WS-111-110713 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7269610  
LL Group # 1432498  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/07/2013 by CP

ExxonMobil c/o Arcadis  
630 Plaza Drive, Suite 600  
Highlands Ranch CO 80129

Submitted: 11/08/2013 09:25

Reported: 11/21/2013 10:27

D-111 SDG#: PEM61-21FD\*

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	0.011 J	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	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.

## Laboratory Sample Analysis Record

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	13314WAC026	11/16/2013 10:17	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13314WAC026	11/11/2013 21:00	Nicholas W Shroyer	1

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

**Quality Control Summary**Client Name: ExxonMobil c/o Arcadis  
Reported: 11/21/13 at 10:27 AM

Group Number: 1432498

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**

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 13313WAC026	Sample number(s): 7269588-7269594								
Acenaphthene	N.D.	0.010	0.050	ug/l	110	110	77-118	0	30
Acenaphthylene	N.D.	0.010	0.050	ug/l	115	115	80-123	0	30
Anthracene	N.D.	0.010	0.050	ug/l	113	114	78-123	1	30
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	114	107	73-127	6	30
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	113	111	72-120	1	30
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	115	121	79-136	5	30
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	120	120	64-130	1	30
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	127	119	73-131	7	30
Chrysene	N.D.	0.010	0.050	ug/l	110	112	76-125	2	30
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	112	110	58-131	2	30
Fluoranthene	N.D.	0.010	0.050	ug/l	112	112	79-124	1	30
Fluorene	N.D.	0.010	0.050	ug/l	113	114	74-115	1	30
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	114	111	62-130	2	30
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	121	122	80-126	0	30
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	122	120	81-124	1	30
Naphthalene	N.D.	0.030	0.050	ug/l	110	110	75-120	0	30
Phenanthrene	N.D.	0.030	0.050	ug/l	104	105	75-120	1	30
Pyrene	N.D.	0.010	0.050	ug/l	105	106	71-130	0	30
Batch number: 13314WAC026	Sample number(s): 7269595-7269610								
Acenaphthene	N.D.	0.010	0.050	ug/l	101		77-118		
Acenaphthylene	N.D.	0.010	0.050	ug/l	108		80-123		
Anthracene	N.D.	0.010	0.050	ug/l	110		78-123		
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	111		73-127		
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	105		72-120		
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	111		79-136		
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	114		64-130		
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	117		73-131		
Chrysene	N.D.	0.010	0.050	ug/l	102		76-125		
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	112		58-131		
Fluoranthene	N.D.	0.010	0.050	ug/l	106		79-124		
Fluorene	N.D.	0.010	0.050	ug/l	106		74-115		
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	111		62-130		
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	115		80-126		
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	114		81-124		
Naphthalene	N.D.	0.030	0.050	ug/l	104		75-120		
Phenanthrene	N.D.	0.030	0.050	ug/l	99		75-120		
Pyrene	N.D.	0.010	0.050	ug/l	104		71-130		

**Sample Matrix Quality Control**

\*- 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.

## Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1432498

Reported: 11/21/13 at 10:27 AM

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

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Batch number: 13314WAC026	Sample number(s): 7269595-7269610 UNSPK: 7269601								
Acenaphthene	102	101	47-136	1	30				
Acenaphthylene	112	110	33-146	1	30				
Anthracene	92	96	69-119	4	30				
Benzo(a)anthracene	100	101	37-150	1	30				
Benzo(a)pyrene	71	70	64-123	0	30				
Benzo(b)fluoranthene	96	97	33-152	1	30				
Benzo(g,h,i)perylene	96	92	36-138	4	30				
Benzo(k)fluoranthene	93	92	31-142	0	30				
Chrysene	93	94	34-135	1	30				
Dibenz(a,h)anthracene	99	94	17-134	6	30				
Fluoranthene	93	100	39-147	7	30				
Fluorene	110	109	38-149	1	30				
Indeno(1,2,3-cd)pyrene	96	92	29-143	4	30				
1-Methylnaphthalene	117	121	49-152	3	30				
2-Methylnaphthalene	114	119	51-146	4	30				
Naphthalene	106	110	58-131	3	30				
Phenanthrene	102	105	48-140	2	30				
Pyrene	97	100	59-125	3	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: 13313WAC026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7269588	108	103	107
7269589	107	97	115
7269590	106	98	113
7269591	105	90	111
7269592	89	92	96
7269593	73	58*	84
7269594	109	109	115
Blank	72	75	75
LCS	109	123	122
LCSD	107	120	119

Limits: 44-137 62-141 51-136

Analysis Name: PAHs in waters by SIM

Batch number: 13314WAC026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7269595	104	102	110

\*- 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.

## Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1432498

Reported: 11/21/13 at 10:27 AM

### Surrogate Quality Control

7269596	107	103	113
7269597	106	100	113
7269598	94	89	110
7269599	95	62	104
7269600	94	89	111
7269601	97	90	112
7269602	95	93	116
7269603	99	91	119
7269604	98	68	110
7269605	95	75	102
7269606	99	94	105
7269607	89	87	102
7269608	103	93	116
7269609	109	112	111
7269610	101	93	114
Blank	76	84	78
LCS	106	119	117
MS	95	93	116
MSD	99	91	119

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.



Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only  
Group # 1432498 Sample # 7269588-610  
Instructions on reverse side correspond with circled numbers.

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

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



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**Kathy Klinefelter**

14739, 1432498, 7269588-610

**From:** Kathy Klinefelter  
**Sent:** Friday, November 08, 2013 3:05 PM  
**To:** 'Parmelee, Rhiannon'; Lewis, Ryan; Kull, Valerie; Mott, Lyndi; Quartey-Papafio, Clement; Chandler, Jennifer; SA Env Entry; Rachel L. Kreamer; Capria, Dennis; Brewer, Stacey; McKenzie, Mary  
**Cc:** Molina, Joe; Lipka, Shelby; Pritchard, Jamie  
**Subject:** RE: Mayflower Surface Water Weekly Sampling COCs and Tracking Numbers  
**Attachments:** Surface Water COC Page 1.jpeg; Surface Water COC Page 2.jpeg; UPS Tracking Numbers.jpeg

For the site specific QC, only duplicate volume was received by the lab. Going forward, please submit triplicate volume. For PAHs SIM, that is 2 bottles each for the parent, MS and MSD samples for a total of 6 bottles instead of 4. Thanks.

---

**From:** Parmelee, Rhiannon [mailto:Rhiannon.Parmelee@arcadis-us.com]  
**Sent:** Friday, November 08, 2013 10:12 AM  
**To:** Lewis, Ryan; Kull, Valerie; Mott, Lyndi; Quartey-Papafio, Clement; Chandler, Jennifer; SA Env Entry; Rachel L. Kreamer; Capria, Dennis; Brewer, Stacey; McKenzie, Mary; Kathy Klinefelter  
**Cc:** Molina, Joe; Lipka, Shelby; Pritchard, Jamie  
**Subject:** RE: Mayflower Surface Water Weekly Sampling COCs and Tracking Numbers

Adding Kathy Klinefelter to this email.

---

**From:** Lewis, Ryan  
**Sent:** Thursday, November 07, 2013 6:46 PM  
**To:** Kull, Valerie; Mott, Lyndi; Quartey-Papafio, Clement; Chandler, Jennifer; SAEnvEntry@lancasterlabs.com; RKreamer@lancasterlabs.com; Capria, Dennis; Brewer, Stacey; McKenzie, Mary  
**Cc:** Molina, Joe; Lipka, Shelby; Parmelee, Rhiannon; Pritchard, Jamie  
**Subject:** Mayflower Surface Water Weekly Sampling COCs and Tracking Numbers

Hello All,

Included are the COC's and tracking numbers for this week's surface water sampling event.

Thanks,

Ryan B Lewis | Geologist 1 | [ryan.lewis@arcadis-us.com](mailto:ryan.lewis@arcadis-us.com)

ARCADIS U.S., Inc. | 111 SW Columbia Street, Suite 670 | Portland, OR 97201  
T: 503 220 8201 ext. 1101 | M: 503 863 9060  
[www.arcadis-us.com](http://www.arcadis-us.com)

ARCADIS, Imagine the result  
Please consider the environment before printing this email.

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11/8/2013

Environmental Sample Administration  
Receipt Documentation Log

1432498

Client/Project: ExxonMobilShipping Container Sealed: YES NODate of Receipt: 11/8/13Custody Seal Present \* : YES NOTime of Receipt: 925\* Custody seal was intact unless otherwise noted in the  
discrepancy sectionSource Code: 60-1Package: Chilled Not Chilled

Temperature of Shipping Containers

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	DT121	0.9	TB	WI	Y	B	
2	↓	0.6	↓	↓	↓	↓	
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: BL 238 Date/Time: 11/8/13 1256

Issued by Dept. 6042 Management

# Explanation of Symbols and Abbreviations

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

<b>RL</b>	Reporting Limit	<b>BMQL</b>	Below Minimum Quantitation Level
<b>N.D.</b>	none detected	<b>MPN</b>	Most Probable Number
<b>TNTC</b>	Too Numerous To Count	<b>CP Units</b>	cobalt-chloroplatinate units
<b>IU</b>	International Units	<b>NTU</b>	nephelometric turbidity units
<b>umhos/cm</b>	micromhos/cm	<b>ng</b>	nanogram(s)
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>meq</b>	milliequivalents	<b>lb.</b>	pound(s)
<b>g</b>	gram(s)	<b>kg</b>	kilogram(s)
<b>µg</b>	microgram(s)	<b>mg</b>	milligram(s)
<b>mL</b>	milliliter(s)	<b>L</b>	liter(s)
<b>m3</b>	cubic meter(s)	<b>µL</b>	microliter(s)
		<b>pg/L</b>	picogram/liter
<b>&lt;</b>	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.		
<b>&gt;</b>	greater than		
<b>ppm</b>	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.		
<b>ppb</b>	parts per billion		
<b>Dry weight basis</b>	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  $\geq$  the Method Detection Limit (MDL) and  $<$  the Limit of Quantitation (LOQ).

## U.S. EPA CLP Data Qualifiers:

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