

## 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

October 26, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 10/22/2013

Group Number: 1428089

SDG: PEM38

PO Number: B0086003.1301

State of Sample Origin: AR

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
WS-018(Surface)102113 Filt Grab Surface Water	7246076
WS-003(Surface)102113 Filt Grab Surface Water	7246077
WS-005(Surface)102113 Filt Grab Surface Water	7246078
WS-014(1.5-2.0)102113 Filt Grab Surface Water	7246079
WS-014(5.5-6.0)102113 Filt Grab Surface Water	7246080
WS-012(1.5-2.0)102113 Filt Grab Surface Water	7246081
WS-012(5.0-5.5)102113 Filt Grab Surface Water	7246082
WS-010(1.5-2.0)102113 Filt Grab Surface Water	7246083
WS-010(3.5-4.0)102113 Filt Grab Surface Water	7246084
WS-006(0.5-1.0)102113 Filt Grab Surface Water	7246085
WS-006(0.5-1.0)102113MS Filt Grab Surface Water	7246086
WS-006(0.5-1.0)102113MSD Filt Grab Surface Water	7246087
WS-006(0.5-1.0)102113DUP Filt Grab Surface Water	7246088
WS-002(Surface)102113 Filt Grab Surface Water	7246089
WS-011(1.5-2.0)102113 Filt Grab Surface Water	7246090
WS-011(5.0-5.5)102113 Filt Grab Surface Water	7246091
WS-007(0.5-1.0)102113 Filt Grab Surface Water	7246092
WS-001(0.5-1.0)102113 Filt Grab Surface Water	7246093
WS-EB-098-102113 Filt Grab Water	7246094

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

ELECTRONIC COPY TO	ARCADIS	Attn: Stephen Barrick
ELECTRONIC COPY TO	ARCADIS	Attn: Lyndi Mott
ELECTRONIC COPY TO	ExxonMobil	Attn: Michael J. Firth

COPY TO		
ELECTRONIC	ARCADIS	Attn: Emily Leamer
COPY TO		
ELECTRONIC	ARCADIS	Attn: Rhiannon Parmalee
COPY TO		
ELECTRONIC	ARCADIS	Attn: Jamie Pritchard
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

---

Project Name: Mayflower, AR Pipeline Incident  
LLI Group #: 1428089

**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:**

No additional comments are necessary.

Sample Description: WS-018 (Surface) 102113 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246076  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 08:40 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

2118F SDG#: PEM38-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
		<b>SW-846 6010B</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0205	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		<b>SW-846 7470A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/25/2013 23:50	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/25/2013 23:50	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/25/2013 23:50	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/25/2013 23:50	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/25/2013 23:50	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/25/2013 23:50	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/25/2013 23:50	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/25/2013 23:50	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/25/2013 23:50	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 05:38	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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

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

Sample Description: WS-003 (Surface)102113 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246077  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 09:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

2103F SDG#: PEM38-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0179	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/25/2013 23:54	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/25/2013 23:54	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/25/2013 23:54	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/25/2013 23:54	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/25/2013 23:54	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/25/2013 23:54	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/25/2013 23:54	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/25/2013 23:54	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/25/2013 23:54	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 05:40	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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

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

Sample Description: WS-005(Surface)102113 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246078  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 09:20 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

2105F SDG#: PEM38-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0154	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/26/2013 00:06	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/26/2013 00:06	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/26/2013 00:06	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/26/2013 00:06	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/26/2013 00:06	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/26/2013 00:06	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/26/2013 00:06	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/26/2013 00:06	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/26/2013 00:06	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 05:42	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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

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

Sample Description: WS-014(1.5-2.0)102113 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246079  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 09:50 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

2114F SDG#: PEM38-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
		<b>SW-846 6010B</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0146	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		<b>SW-846 7470A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/26/2013 00:10	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/26/2013 00:10	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/26/2013 00:10	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/26/2013 00:10	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/26/2013 00:10	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/26/2013 00:10	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/26/2013 00:10	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/26/2013 00:10	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/26/2013 00:10	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 05:44	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-014(5.5-6.0)102113 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246080  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

21F14 SDG#: PEM38-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0139	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/26/2013 00:14	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/26/2013 00:14	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/26/2013 00:14	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/26/2013 00:14	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/26/2013 00:14	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/26/2013 00:14	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/26/2013 00:14	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/26/2013 00:14	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/26/2013 00:14	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 05:46	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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



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)102113 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246081  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:10 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

2112F SDG#: PEM38-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0153	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/26/2013 00:18	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/26/2013 00:18	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/26/2013 00:18	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/26/2013 00:18	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/26/2013 00:18	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/26/2013 00:18	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/26/2013 00:18	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/26/2013 00:18	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/26/2013 00:18	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 05:48	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-012(5.0-5.5)102113 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246082  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:20 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

21F12 SDG#: PEM38-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0156	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/26/2013 00:22	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/26/2013 00:22	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/26/2013 00:22	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/26/2013 00:22	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/26/2013 00:22	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/26/2013 00:22	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/26/2013 00:22	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/26/2013 00:22	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/26/2013 00:22	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 05:50	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-010(1.5-2.0)102113 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246083  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:40 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

2110F SDG#: PEM38-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0177	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/26/2013 00:26	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/26/2013 00:26	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/26/2013 00:26	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/26/2013 00:26	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/26/2013 00:26	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/26/2013 00:26	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/26/2013 00:26	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/26/2013 00:26	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/26/2013 00:26	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 05:52	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-010(3.5-4.0)102113 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246084  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:50 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

21F10 SDG#: PEM38-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0180	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/26/2013 00:30	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/26/2013 00:30	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/26/2013 00:30	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/26/2013 00:30	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/26/2013 00:30	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/26/2013 00:30	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/26/2013 00:30	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/26/2013 00:30	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/26/2013 00:30	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 05:58	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-006(0.5-1.0)102113 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246085  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

2106F SDG#: PEM38-10BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0166	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/25/2013 23:26	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/25/2013 23:26	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/25/2013 23:26	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/25/2013 23:26	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/25/2013 23:26	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/25/2013 23:26	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/25/2013 23:26	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/25/2013 23:26	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/25/2013 23:26	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 06:00	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-006(0.5-1.0)102113MS Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246086  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

2106F SDG#: PEM38-10MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	0.152	0.0068	0.0200	1
07046	Barium	7440-39-3	2.07	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0517	0.00076	0.0050	1
07051	Chromium	7440-47-3	0.210	0.0016	0.0150	1
07055	Lead	7439-92-1	0.160	0.0047	0.0150	1
07061	Nickel	7440-02-0	0.530	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.154	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0457	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.529	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	0.0010	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/25/2013 23:38	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/25/2013 23:38	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/25/2013 23:38	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/25/2013 23:38	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/25/2013 23:38	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/25/2013 23:38	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/25/2013 23:38	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/25/2013 23:38	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/25/2013 23:38	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 06:04	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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

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)102113MSD Filtr Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246087  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

2106F SDG#: PEM38-10MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	0.151	0.0068	0.0200	1
07046	Barium	7440-39-3	2.05	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0517	0.00076	0.0050	1
07051	Chromium	7440-47-3	0.209	0.0016	0.0150	1
07055	Lead	7439-92-1	0.159	0.0047	0.0150	1
07061	Nickel	7440-02-0	0.532	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.158	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0458	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.525	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	0.0010	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/25/2013 23:42	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/25/2013 23:42	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/25/2013 23:42	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/25/2013 23:42	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/25/2013 23:42	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/25/2013 23:42	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/25/2013 23:42	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/25/2013 23:42	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/25/2013 23:42	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 06:06	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-006(0.5-1.0)102113DUP Filtr Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246088  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

2106F SDG#: PEM38-10DUP

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0163	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/25/2013 23:34	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/25/2013 23:34	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/25/2013 23:34	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/25/2013 23:34	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/25/2013 23:34	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/25/2013 23:34	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/25/2013 23:34	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/25/2013 23:34	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/25/2013 23:34	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 06:02	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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



Sample Description: WS-002 (Surface)102113 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246089  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:40 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

2102F SDG#: PEM38-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0169	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/26/2013 00:34	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/26/2013 00:34	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/26/2013 00:34	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/26/2013 00:34	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/26/2013 00:34	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/26/2013 00:34	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/26/2013 00:34	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/26/2013 00:34	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/26/2013 00:34	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 06:08	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-011(1.5-2.0)102113 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246090  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 12:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

2111F SDG#: PEM38-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0176	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/26/2013 00:38	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/26/2013 00:38	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/26/2013 00:38	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/26/2013 00:38	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/26/2013 00:38	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/26/2013 00:38	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/26/2013 00:38	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/26/2013 00:38	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/26/2013 00:38	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 06:11	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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

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)102113 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246091  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 12:10 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

21F11 SDG#: PEM38-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0182	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/26/2013 00:42	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/26/2013 00:42	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/26/2013 00:42	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/26/2013 00:42	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/26/2013 00:42	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/26/2013 00:42	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/26/2013 00:42	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/26/2013 00:42	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/26/2013 00:42	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 06:13	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-007(0.5-1.0)102113 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246092  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 12:20 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

2107F SDG#: PEM38-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0277	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/26/2013 00:54	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/26/2013 00:54	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/26/2013 00:54	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/26/2013 00:54	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/26/2013 00:54	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/26/2013 00:54	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/26/2013 00:54	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/26/2013 00:54	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/26/2013 00:54	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 06:15	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-001(0.5-1.0)102113 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7246093  
LL Group # 1428089  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 12:40 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

2101F SDG#: PEM38-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0160	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/26/2013 00:58	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/26/2013 00:58	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/26/2013 00:58	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/26/2013 00:58	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/26/2013 00:58	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/26/2013 00:58	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/26/2013 00:58	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/26/2013 00:58	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/26/2013 00:58	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 06:17	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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

Sample Description: **WS-EB-098-102113 Filt Grab Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7246094**  
 LL Group # **1428089**  
 Account # **14739**

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

Collected: 10/21/2013 13:30 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/26/2013 06:18

2198F SDG#: PEM38-16EB\*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	N.D.	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132971848001	10/26/2013 01:02	John P Hook	1
07046	Barium	SW-846 6010B	1	132971848001	10/26/2013 01:02	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132971848001	10/26/2013 01:02	John P Hook	1
07051	Chromium	SW-846 6010B	1	132971848001	10/26/2013 01:02	John P Hook	1
07055	Lead	SW-846 6010B	1	132971848001	10/26/2013 01:02	John P Hook	1
07061	Nickel	SW-846 6010B	1	132971848001	10/26/2013 01:02	John P Hook	1
07036	Selenium	SW-846 6010B	1	132971848001	10/26/2013 01:02	John P Hook	1
07066	Silver	SW-846 6010B	1	132971848001	10/26/2013 01:02	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132971848001	10/26/2013 01:02	John P Hook	1
00259	Mercury	SW-846 7470A	1	132965713005	10/25/2013 06:23	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132971848001	10/25/2013 05:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132965713005	10/24/2013 15:20	Nelli S Markaryan	1

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

## Quality Control Summary

Client Name: ExxonMobil c/o Arcadis  
Reported: 10/26/13 at 06:18 AM

Group Number: 1428089

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: 132965713005	Sample number(s): 7246076-7246094								
Mercury	N.D.	0.00006	0.00020	mg/l	100		80-120		
		0							
Batch number: 132971848001	Sample number(s): 7246076-7246094								
Arsenic	N.D.	0.0068	0.0200	mg/l	100		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	102		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	104		90-112		
Chromium	N.D.	0.0016	0.0150	mg/l	104		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	110		88-110		
Nickel	N.D.	0.0015	0.0100	mg/l	107		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	103		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	91		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	105		90-110		

### 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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 132965713005	Sample number(s): 7246076-7246094 UNSPK: 7246085 BKG: 7246085								
Mercury	100	101	80-120	1	20	N.D.	N.D.	0 (1)	20
Batch number: 132971848001	Sample number(s): 7246076-7246094 UNSPK: 7246085 BKG: 7246085								
Arsenic	102	101	81-123	1	20	N.D.	N.D.	0 (1)	20
Barium	103	102	78-118	1	20	0.0166	0.0163	2 (1)	20
Cadmium	103	103	83-116	0	20	N.D.	N.D.	0 (1)	20
Chromium	105	105	76-120	0	20	N.D.	N.D.	0 (1)	20
Lead	107	106	75-125	1	20	N.D.	N.D.	0 (1)	20
Nickel	106	106	86-115	0	20	N.D.	N.D.	0 (1)	20
Selenium	103	105	75-125	2	20	N.D.	N.D.	0 (1)	20
Silver	91	92	75-125	0	20	N.D.	N.D.	0 (1)	20
Vanadium	106	105	90-117	1	20	N.D.	N.D.	0 (1)	20

\*- Outside of specification

\*\* - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

# ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories  
Environmental

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only  
Group # 1428089 Sample # 7246076-94  
Instructions on reverse side correspond with circled numbers.

1 of 2

1 Client Information				4 Matrix				5 Analyses Requested								SCR#: _____																																																																																																																																																																																	
Facility #/Site: <u>Mayflower Pipeline Incident</u>				<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> NPDES <input checked="" type="checkbox"/> Surface <input type="checkbox"/> Oil <input type="checkbox"/> Air				Preservation Code								Preservation Codes H = HCl      T = Thiosulfate N = HNO <sub>3</sub> B = NaOH S = H <sub>2</sub> SO <sub>4</sub> O = Other																																																																																																																																																																																	
Site Address: <u>Mayflower, AR</u>								<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">H</td> <td style="width: 20px; text-align: center;">N</td> <td style="width: 20px; text-align: center;">H</td> <td style="width: 20px; text-align: center;"></td> <td style="width: 20px; text-align: center;"></td> <td style="width: 20px; text-align: center;"></td> <td style="width: 20px; text-align: center;"></td> <td style="width: 20px; text-align: center;"></td> <td style="width: 20px; text-align: center;"></td> <td style="width: 20px; text-align: center;"></td> <td style="width: 20px; text-align: center;"></td> <td style="width: 20px; text-align: center;"></td> <td style="width: 20px; text-align: center;"></td> <td style="width: 20px; text-align: center;"></td> <td style="width: 20px; text-align: center;"></td> <td style="width: 20px; text-align: center;"></td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> </tr> </table>										H	N	H														X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6 Remarks  Lab to filter and pressure diss. metals upon receipt																																																																																																																																															
H	N	H																																																																																																																																																																																															
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																																																																																																																																																																																		
ExxonMobil PM: <u>Scott Bushroe</u>		Cost Center/AFE: _____		Total # of Containers <u>VOES 8260 B</u> <u>PAH 8270 SIM</u> <u>RCRA Metals + Arsenic Ni, V, Cr, Mg</u> <u>Diss Metals</u> <u>HEAV OIL &amp; Grease</u>																																																																																																																																																																																													
Consultant/Office: <u>ARCADIS</u>												Consultant Phone #: <u>919-302-6799</u>				3 Grab Composite Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/>																																																																																																																																																																																	
Consultant PM: <u>Steve Barrick</u>		Sampler: <u>Clement Papafio / Ryan Lewis</u>		2 Sample Identification				Collected Date      Time      Grab      Composite																																																																																																																																																																																									
Site Address: <u>Mayflower, AR</u>		Site Address: <u>Mayflower, AR</u>														<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sample ID</th> <th>Date</th> <th>Time</th> <th>Grab</th> <th>Composite</th> <th>Soil</th> <th>Water</th> <th>Oil</th> <th>Total # of Containers</th> <th>VOES</th> <th>PAH</th> <th>RCRA Metals + Arsenic Ni, V, Cr, Mg</th> <th>Diss Metals</th> <th>HEAV OIL &amp; Grease</th> </tr> </thead> <tbody> <tr> <td>WS-018 (Surface) 102113</td> <td>10-21-13</td> <td>0840</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td>9</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>WS-003 (Surface) 102113</td> <td>10-21-13</td> <td>0900</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td>9</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>WS-005 (Surface) 102113</td> <td>10-21-13</td> <td>0920</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td>9</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>WS-014 (1.5-2.0) 102113</td> <td>10-21-13</td> <td>0950</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td>9</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>WS-014 (5.5-6.0) 102113</td> <td>10-21-13</td> <td>1000</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td>9</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>WS-012 (1.5-2.0) 102113</td> <td>10-21-13</td> <td>1010</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td>9</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>WS-012 (5.0-5.5) 102113</td> <td>10-21-13</td> <td>1020</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td>9</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>WS-010 (1.5-2.0) 102113</td> <td>10-21-13</td> <td>1040</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td>9</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>WS-010 (3.5-4.0) 102113</td> <td>10-21-13</td> <td>1050</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td>9</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>WS-006 (0.5-1.0) 102113</td> <td>10-21-13</td> <td>1100</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td>9</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>WS-002 (Surface) 102113</td> <td>10-21-13</td> <td>1140</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td>9</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>WS-011 (1.5-2.0) 102113</td> <td>10-21-13</td> <td>1200</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td>9</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table>								Sample ID	Date	Time	Grab	Composite	Soil	Water	Oil	Total # of Containers	VOES	PAH	RCRA Metals + Arsenic Ni, V, Cr, Mg	Diss Metals	HEAV OIL & Grease	WS-018 (Surface) 102113	10-21-13	0840	X			X		9	X	X	X	X	X	WS-003 (Surface) 102113	10-21-13	0900	X			X		9	X	X	X	X	X	WS-005 (Surface) 102113	10-21-13	0920	X			X		9	X	X	X	X	X	WS-014 (1.5-2.0) 102113	10-21-13	0950	X			X		9	X	X	X	X	X	WS-014 (5.5-6.0) 102113	10-21-13	1000	X			X		9	X	X	X	X	X	WS-012 (1.5-2.0) 102113	10-21-13	1010	X			X		9	X	X	X	X	X	WS-012 (5.0-5.5) 102113	10-21-13	1020	X			X		9	X	X	X	X	X	WS-010 (1.5-2.0) 102113	10-21-13	1040	X			X		9	X	X	X	X	X	WS-010 (3.5-4.0) 102113	10-21-13	1050	X			X		9	X	X	X	X	X	WS-006 (0.5-1.0) 102113	10-21-13	1100	X			X		9	X	X	X	X	X	WS-002 (Surface) 102113	10-21-13	1140	X			X		9	X	X	X	X	X	WS-011 (1.5-2.0) 102113	10-21-13
Sample ID	Date	Time	Grab	Composite	Soil	Water	Oil	Total # of Containers	VOES	PAH	RCRA Metals + Arsenic Ni, V, Cr, Mg	Diss Metals	HEAV OIL & Grease																																																																																																																																																																																				
WS-018 (Surface) 102113	10-21-13	0840	X			X		9	X	X	X	X	X																																																																																																																																																																																				
WS-003 (Surface) 102113	10-21-13	0900	X			X		9	X	X	X	X	X																																																																																																																																																																																				
WS-005 (Surface) 102113	10-21-13	0920	X			X		9	X	X	X	X	X																																																																																																																																																																																				
WS-014 (1.5-2.0) 102113	10-21-13	0950	X			X		9	X	X	X	X	X																																																																																																																																																																																				
WS-014 (5.5-6.0) 102113	10-21-13	1000	X			X		9	X	X	X	X	X																																																																																																																																																																																				
WS-012 (1.5-2.0) 102113	10-21-13	1010	X			X		9	X	X	X	X	X																																																																																																																																																																																				
WS-012 (5.0-5.5) 102113	10-21-13	1020	X			X		9	X	X	X	X	X																																																																																																																																																																																				
WS-010 (1.5-2.0) 102113	10-21-13	1040	X			X		9	X	X	X	X	X																																																																																																																																																																																				
WS-010 (3.5-4.0) 102113	10-21-13	1050	X			X		9	X	X	X	X	X																																																																																																																																																																																				
WS-006 (0.5-1.0) 102113	10-21-13	1100	X			X		9	X	X	X	X	X																																																																																																																																																																																				
WS-002 (Surface) 102113	10-21-13	1140	X			X		9	X	X	X	X	X																																																																																																																																																																																				
WS-011 (1.5-2.0) 102113	10-21-13	1200	X			X		9	X	X	X	X	X																																																																																																																																																																																				
7 Turnaround Time Requested (TAT) (please circle)				Relinquished by: <u>[Signature]</u>				Date: <u>10-21-13</u> Time: <u>1530</u>		Received by: _____		Date: _____ Time: _____																																																																																																																																																																																					
Standard <u>5 day</u> 4 day				Relinquished by: _____				Date: _____ Time: _____		Received by: _____		Date: _____ Time: _____																																																																																																																																																																																					
72 hour      48 hour      24 hour				Relinquished by: _____				Date: _____ Time: _____		Received by: _____		Date: _____ Time: _____																																																																																																																																																																																					
8 Data Package (circle if required)				Relinquished by Commercial Carrier				Date: _____ Time: _____		Received by: <u>[Signature]</u>		Date: <u>10/22/13</u> Time: <u>0930</u>																																																																																																																																																																																					
Type I - Full				UPS <input checked="" type="checkbox"/> FedEx _____ Other _____				Temperature Upon Receipt: <u>0.3-2.3 °C</u>		Custody Seals Intact? <u>(Yes)</u> No																																																																																																																																																																																							
Type VI (Raw Data)																																																																																																																																																																																																	
NJ Reduced																																																																																																																																																																																																	
Other _____																																																																																																																																																																																																	

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.

7053 0713





Environmental Sample Administration 1428089  
 Receipt Documentation Log

Client/Project: Mayflower  
 Date of Receipt: 10/22/13  
 Time of Receipt: 0930  
 Source Code: 60-1

Shipping Container Sealed: YES NO  
 Custody Seal Present \* : YES NO  
 \* Custody seal was intact unless otherwise noted in the discrepancy section  
 Package: 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	1.4	TB	WI	Y	B	
2	↓	2.3	↓	↓	↓	↓	
3		0.6					
4		0.3					
5		0.5					
6		0.4					

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

Paperwork Discrepancy/Unpacking Problems:

---



---



---



---

Unpacker Signature/Emp#: [Signature] 3647 Date/Time: 10/22/13 1018

# 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

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

> greater than

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

**ppb** parts per billion

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

*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**

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns  $>25\%$
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

**Inorganic Qualifiers**

- B** Value is  $<$ CRDL, but  $\geq$ IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike sample not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- \*** Duplicate analysis not within control limits
- +** 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.

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