

## 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

September 20, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 09/16/2013

Group Number: 1419157

SDG: PEL52

PO Number: B0086003.1301

State of Sample Origin: AR

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
WS-014(1.5-2.0)091513 Filt Grab Surface Water	7199384
WS-014(5.5-6.0)091513 Filt Grab Surface Water	7199385
WS-012(1.5-2.0)091513 Filt Grab Surface Water	7199386
WS-012(5.0-5.5)091513 Filt Grab Surface Water	7199387
WS-010(1.5-2.0)091513 Filt Grab Surface Water	7199388
WS-010(3.5-4.0)091513 Filt Grab Surface Water	7199389
WS-006(0.5-1.0)091513 Filt Grab Surface Water	7199390
WS-006(0.5-1.0)091513MS Filt Grab Surface Water	7199391
WS-006(0.5-1.0)091513MSD Filt Grab Surface Water	7199392
WS-006(0.5-1.0)091513DUP Filt Grab Surface Water	7199393
WS-005(Surface)091513 Filt Grab Surface Water	7199394
WS-002(Surface)091513 Filt Grab Surface Water	7199395
WS-011(1.5-2.0)091513 Filt Grab Surface Water	7199396
WS-011(5.0-5.5)091513 Filt Grab Surface Water	7199397
WS-018(Surface)091513 Filt Grab Surface Water	7199398
WS-003(Surface)091513 Filt Grab Surface Water	7199399
WS-007(0.5-1.0)091513 Filt Grab Surface Water	7199400
WS-001(0.5-1.0)091513 Filt Grab Surface Water	7199401
WS-EB-62-091513 Filt Grab Water	7199402

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

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ELECTRONIC	ARCADIS	Attn: Emily Leamer
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ELECTRONIC	ARCADIS	Attn: Rhiannon Parmalee
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ELECTRONIC	ARCADIS	Attn: Jamie Pritchard
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ELECTRONIC	ExxonMobil	Attn: Michael L Sixsmith
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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 #: 1419157

**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-014(1.5-2.0)091513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7199384  
LL Group # 1419157  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 08:50 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5201 SDG#: PEL52-01

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	0.0078 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0109	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	132601848005	09/19/2013 09:09	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 09:09	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 09:09	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 09:09	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 09:09	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 09:09	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 09:09	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 09:09	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 09:09	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 06:25	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	Nelli S Markaryan	1

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

Sample Description: WS-014(5.5-6.0)091513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7199385  
LL Group # 1419157  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 09:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5202 SDG#: PEL52-02

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	0.0108	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	132601848005	09/19/2013 09:13	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 09:13	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 09:13	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 09:13	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 09:13	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 09:13	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 09:13	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 09:13	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 09:13	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 06:31	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	Nelli S Markaryan	1

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

Sample Description: WS-012(1.5-2.0)091513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7199386  
LL Group # 1419157  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 09:20 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5203 SDG#: PEL52-03

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	0.0187	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	132601848005	09/19/2013 09:25	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 09:25	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 09:25	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 09:25	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 09:25	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 09:25	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 09:25	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 09:25	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 09:25	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 06:33	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	Nelli S Markaryan	1

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

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Sample Description: WS-012(5.0-5.5)091513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7199387  
LL Group # 1419157  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 09:30 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5204 SDG#: PEL52-04

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	0.0207	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	132601848005	09/19/2013 09:29	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 09:29	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 09:29	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 09:29	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 09:29	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 09:29	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 09:29	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 09:29	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 09:29	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 06:35	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	Nelli S Markaryan	1

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

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Sample Description: WS-010(1.5-2.0)091513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7199388  
LL Group # 1419157  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 09:40 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5205 SDG#: PEL52-05

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	0.0205	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	132601848005	09/19/2013 09:33	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 09:33	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 09:33	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 09:33	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 09:33	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 09:33	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 09:33	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 09:33	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 09:33	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 06:37	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	Nelli S Markaryan	1

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



Sample Description: WS-010(3.5-4.0)091513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7199389  
LL Group # 1419157  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 09:50 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5206 SDG#: PEL52-06

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	0.0214	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	132601848005	09/19/2013 09:37	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 09:37	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 09:37	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 09:37	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 09:37	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 09:37	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 09:37	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 09:37	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 09:37	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 06:39	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	Nelli S Markaryan	1

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

Sample Description: WS-006(0.5-1.0)091513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7199390  
LL Group # 1419157  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 10:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5207 SDG#: PEL52-07BKG

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	132601848005	09/19/2013 08:45	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 08:45	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 08:45	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 08:45	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 08:45	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 08:45	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 08:45	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 08:45	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 08:45	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 06:41	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	Nelli S Markaryan	1

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

Sample Description: WS-006(0.5-1.0)091513MS Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7199391  
LL Group # 1419157  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 10:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5207 SDG#: PEL52-07MS

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	0.155	0.0068	0.0200	1
07046	Barium	7440-39-3	2.03	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0510	0.00076	0.0050	1
07051	Chromium	7440-47-3	0.204	0.0016	0.0150	1
07055	Lead	7439-92-1	0.152	0.0047	0.0150	1
07061	Nickel	7440-02-0	0.517	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.151	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0457	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.516	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	0.00091	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	132601848005	09/19/2013 08:57	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 08:57	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 08:57	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 08:57	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 08:57	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 08:57	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 08:57	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 08:57	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 08:57	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 06:45	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	Nelli S Markaryan	1

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

Sample Description: WS-006(0.5-1.0)091513MSD Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7199392  
LL Group # 1419157  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 10:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5207 SDG#: PEL52-07MSD

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	0.154	0.0068	0.0200	1
07046	Barium	7440-39-3	2.01	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0505	0.00076	0.0050	1
07051	Chromium	7440-47-3	0.202	0.0016	0.0150	1
07055	Lead	7439-92-1	0.152	0.0047	0.0150	1
07061	Nickel	7440-02-0	0.513	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.149	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0447	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.506	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	0.00093	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	132601848005	09/19/2013 09:01	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 09:01	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 09:01	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 09:01	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 09:01	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 09:01	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 09:01	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 09:01	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 09:01	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 06:47	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	Nelli S Markaryan	1

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

Sample Description: WS-006(0.5-1.0)091513DUP Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7199393  
LL Group # 1419157  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 10:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5207 SDG#: PEL52-07DUP

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	132601848005	09/19/2013 08:53	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 08:53	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 08:53	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 08:53	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 08:53	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 08:53	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 08:53	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 08:53	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 08:53	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 06:43	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	Nelli S Markaryan	1

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

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Sample Description: WS-005 (Surface) 091513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7199394  
LL Group # 1419157  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 10:35 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5208 SDG#: PEL52-08

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	0.0136	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	132601848005	09/19/2013 09:41	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 09:41	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 09:41	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 09:41	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 09:41	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 09:41	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 09:41	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 09:41	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 09:41	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 06:49	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	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-002 (Surface) 091513 Filt Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7199395**  
 LL Group # **1419157**  
 Account # **14739**

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

Collected: 09/15/2013 10:50 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5209 SDG#: PEL52-09

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	0.0246	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	132601848005	09/19/2013 09:45	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 09:45	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 09:45	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 09:45	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 09:45	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 09:45	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 09:45	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 09:45	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 09:45	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 06:59	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	Nelli S Markaryan	1

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

Sample Description: WS-011(1.5-2.0)091513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7199396  
LL Group # 1419157  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 11:05 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5210 SDG#: PEL52-10

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	0.0253	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	132601848005	09/19/2013 09:49	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 09:49	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 09:49	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 09:49	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 09:49	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 09:49	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 09:49	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 09:49	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 09:49	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 07:01	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	Nelli S Markaryan	1

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



Sample Description: WS-011(5.0-5.5)091513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7199397  
LL Group # 1419157  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 11:15 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5211 SDG#: PEL52-11

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	0.0259	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	132601848005	09/19/2013 09:53	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 09:53	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 09:53	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 09:53	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 09:53	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 09:53	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 09:53	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 09:53	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 09:53	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 07:03	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	Nelli S Markaryan	1

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

Sample Description: WS-018 (Surface) 091513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7199398  
LL Group # 1419157  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 11:30 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5212 SDG#: PEL52-12

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	0.0356	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	132601848005	09/19/2013 09:57	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 09:57	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 09:57	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 09:57	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 09:57	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 09:57	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 09:57	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 09:57	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 09:57	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 07:05	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	Nelli S Markaryan	1

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

Sample Description: WS-003 (Surface) 091513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7199399  
LL Group # 1419157  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 11:40 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5213 SDG#: PEL52-13

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	0.0238	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	132601848005	09/19/2013 10:01	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 10:01	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 10:01	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 10:01	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 10:01	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 10:01	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 10:01	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 10:01	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 10:01	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 07:07	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	Nelli S Markaryan	1

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

Sample Description: WS-007(0.5-1.0)091513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7199400  
LL Group # 1419157  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 11:50 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5214 SDG#: PEL52-14

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	0.0190	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	132601848005	09/19/2013 10:13	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 10:13	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 10:13	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 10:13	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 10:13	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 10:13	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 10:13	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 10:13	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 10:13	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 07:09	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	Nelli S Markaryan	1

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

Sample Description: WS-001(0.5-1.0)091513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7199401  
LL Group # 1419157  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 12:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5215 SDG#: PEL52-15

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	0.0164	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	132601848005	09/19/2013 10:17	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 10:17	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 10:17	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 10:17	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 10:17	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 10:17	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 10:17	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 10:17	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 10:17	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 07:11	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	Nelli S Markaryan	1

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

Sample Description: **WS-EB-62-091513 Filt Grab Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7199402**  
 LL Group # **1419157**  
 Account # **14739**

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

Collected: 09/15/2013 13:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/20/2013 05:27

P5216 SDG#: PEL52-16EB\*

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	132601848005	09/19/2013 10:21	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132601848005	09/19/2013 10:21	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132601848005	09/19/2013 10:21	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132601848005	09/19/2013 10:21	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132601848005	09/19/2013 10:21	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132601848005	09/19/2013 10:21	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132601848005	09/19/2013 10:21	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132601848005	09/19/2013 10:21	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132601848005	09/19/2013 10:21	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132605713006	09/19/2013 07:13	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848005	09/18/2013 10:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132605713006	09/18/2013 14:45	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: 09/20/13 at 05:27 AM

Group Number: 1419157

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: 132601848005	Sample number(s): 7199384-7199402								
Arsenic	N.D.	0.0068	0.0200	mg/l	101		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	99		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	103		90-112		
Chromium	N.D.	0.0016	0.0150	mg/l	101		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	103		88-110		
Nickel	N.D.	0.0015	0.0100	mg/l	103		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	99		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	91		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	102		90-110		
Batch number: 132605713006	Sample number(s): 7199384-7199402								
Mercury	N.D.	0.00006	0.00020	mg/l	97		80-120		
		0							

### 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: 132601848005	Sample number(s): 7199384-7199402 UNSPK: 7199390 BKG: 7199390								
Arsenic	103	103	81-123	0	20	N.D.	N.D.	0 (1)	20
Barium	101	100	78-118	1	20	0.0163	0.0163	0 (1)	20
Cadmium	102	101	83-116	1	20	N.D.	N.D.	0 (1)	20
Chromium	102	101	81-120	1	20	N.D.	N.D.	0 (1)	20
Lead	101	101	75-125	0	20	N.D.	N.D.	0 (1)	20
Nickel	103	103	86-115	1	20	N.D.	N.D.	0 (1)	20
Selenium	101	99	75-125	2	20	N.D.	N.D.	0 (1)	20
Silver	91	89	75-125	2	20	N.D.	N.D.	0 (1)	20
Vanadium	103	101	90-111	2	20	N.D.	N.D.	0 (1)	20
Batch number: 132605713006	Sample number(s): 7199384-7199402 UNSPK: 7199390 BKG: 7199390								
Mercury	91	93	80-120	1	20	N.D.	N.D.	0 (1)	20

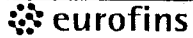
\*- Outside of specification

\*\* - 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 # 1419157 Sample # 7199384-402

2 of 3

Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix				5 Analyses Requested										6 Remarks				
Facility #/SID: <u>Mayflower Pipeline Incident</u> Site Address: <u>Mayflower, AR</u> ExxonMobil PM: <u>Scott Bushrooe</u> Consultant/Office: <u>ARCADIS</u> Consultant PM: <u>Steve Barrick</u> Consultant Phone #: <u>919 372 6799</u>				Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input checked="" type="checkbox"/> Oil <input type="checkbox"/> Air <input type="checkbox"/>				Preservation Code H <input type="checkbox"/> V <input type="checkbox"/> Z <input type="checkbox"/> H <input type="checkbox"/> VOCs <u>8260 B</u> PAH <u>8270 SIM</u> RCRA Metals <u>Finestess N.V. Cap. Mfg.</u> Diss Metals HEM Oil & Grease										SCR#: _____ Preservation Codes H = HCl      T = Thiosulfate N = HNO <sub>3</sub> B = NaOH S = H <sub>2</sub> SO <sub>4</sub> O = Other				
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Oil	Total # of Containers													
Sample Identification	Date	Time																				
WS-003 (Surface)	091413	9-14-13	1130	X			X		9	X	X	X	X	X								
WS-007 (0.5-1.0)	091413	9-14-13	1140	X			X		9	X	X	X	X	X								
WS-001 (0.5-1.0)	091413	9-14-13	1150	X			X		9	X	X	X	X	X								
WS-EB-61-091413		9-14-13	1230	X			X		7	X	X	X	X	X								
DWP-WS-87-091413		9-14-13	—	X			X		9	X	X	X	X	X								
WS-014 (1.5-2.0)	091513	9-15-13	0850	X			X		9	X	X	X	X	X								
WS-014 (5.5-6.0)	091513	9-15-13	0900	X			X		9	X	X	X	X	X								
WS-012 (1.5-2.0)	091513	9-15-13	0920	X			X		9	X	X	X	X	X								
WS-012 (5.0-5.5)	091513	9-15-13	0930	X			X		9	X	X	X	X	X								
WS-010 (1.5-2.0)	091513	9-15-13	0940	X			X		9	X	X	X	X	X								
WS-010 (3.5-4.0)	091513	9-15-13	0950	X			X		9	X	X	X	X	X								
WS-006 (0.5-1.0)	091513	9-15-13	1000	X			X		9	X	X	X	X	X								

7 Turnaround Time Requested (TAT) (please circle)				Relinquished by <u>M.S.</u>		Date <u>9.15.13</u>	Time <u>1400</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		Temperature Upon Receipt <u>0.5-4.0°C</u>		Received by <u>Annelise H. Owen</u>		Date <u>9/16/13</u>	Time <u>1315</u>
				Type I - Full	Type VI (Raw Data)	NJ Reduced	Other _____	UPS _____	FedEx _____	Other <u>Southwest</u>	Custody Seals Intact? <u>Yes</u> No
9				EDD (circle if required)							
9				Locus EIM (default)							
9				Other _____							

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



# ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories  
Environmental

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only

Group # 1419157 Sample # 7199384-902

Instructions on reverse side correspond with circled numbers.

3 of 3

1 Client Information				4 Matrix				5 Analyses Requested										6 Remarks						
Facility #/SID <u>Mayflower Pipeline Incident</u>				Soil <input type="checkbox"/>	Sediment <input type="checkbox"/>	Potable <input type="checkbox"/>	Ground <input type="checkbox"/>	Surface <input checked="" type="checkbox"/>	Oil <input type="checkbox"/>	Air <input type="checkbox"/>	Total # of Containers	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>												H    I    L    M    N    O    P    Q    R    S    T    U    V    W    X    Y    Z												
ExxonMobil PM <u>Scott Bushroe</u>		Cost Center/AFE																						
Consultant/Office <u>ARCADIS</u>																								
Consultant PM <u>Steve Barrick</u>		Consultant Phone # <u>919 302 6799</u>																						
Sampler <u>Hans Van Aller / Dave Drost / Ryan Lewis</u>																								
2 Sample Identification		3 Collected		Grab	Composite																			
		Date	Time																					
WS-005 (surface) 091513		9-15-13	1035	X			X				9	X	X	X	X	X								
WS-002 (surface) 091513		9-15-13	1050	X			X				9	X	X	X	X	X								
WS-011 (1.5-2.0) 091513		9-15-13	1105	X			X				9	X	X	X	X	X								
WS-011 (5.0-5.5) 091513		9-15-13	1115	X			X				9	X	X	X	X	X								
WS-018 (surface) 091513		9-15-13	1130	X			X				9	X	X	X	X	X								
WS-003 (surface) 091513		9-15-13	1140	X			X				9	X	X	X	X	X								
WS-007 (0.5-1.0) 091513		9-15-13	1150	X			X				9	X	X	X	X	X								
WS-001 (0.5-1.0) 091513		9-15-13	1200	X			X				9	X	X	X	X	X								
WS-006 (0.5-1.0) 091513 MS/MSD		9-15-13	1000	X			X				18	X	X	X	X	X								MS/MSD
WS-EB-62-091513		9-15-13	1300	X			X				7	X	X	X	X									
WS-TB-150-091513		9-15-13	—	X			X				2	X												

7 Turnaround Time Requested (TAT) (please circle)				Relinquished by <u>D. Drost</u>		Date <u>9.15.13</u> Time <u>1400</u>		Received by		Date		Time	
Standard <u>5 day</u> 4 day													
72 hour      48 hour      24 hour													
8 Data Package (circle if required)				Relinquished by Commercial Carrier		Date		Time		Received by		Time	
Type I - Full				Locus EIM (default)						Annexie H. Owen		9/16/13	
Type VI (Raw Data)				Other _____		UPS _____ FedEx _____ Other <u>Southwest</u>						1315	
NJ Reduced						Temperature Upon Receipt <u>0.5-4.0 °C</u>				Custody Seals Intact?		<u>Yes</u> No	
Other _____													

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Environmental Sample Administration  
Receipt Documentation Log

Client/Project: XOM - Mayflower  
 Date of Receipt: 9/16/13  
 Time of Receipt: 1315  
 Source Code: 01

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	DT146	4.0	TB	WI	Y	B	
2	↓	0.9	↓	↓	↓	↓	
3		0.5					
4		3.7					
5		0.8					
6		0.6					

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

Paperwork Discrepancy/Unpacking Problems:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Unpacker Signature/Emp#: Anneliese H. Owen /210 Date/Time: 9/16/13 1336

Environmental Sample Administration  
 Receipt Documentation Log

Client/Project: XOM - Mayflower  
 Date of Receipt: 9/16/13  
 Time of Receipt: 1315  
 Source Code: 01

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
27	DT146	0.7	TB	WI	Y	B	
28		1.9					
29		1.1					
40		1.0					
41	↓	0.6	↓	↓	↓	↓	
6	_____						

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

Paperwork Discrepancy/Unpacking Problems:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Unpacker Signature/Emp#: Annalisa H. Owen / 210 Date/Time: 9/16/13 1330

# 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**

**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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