

ANALYTICAL RESULTS

Prepared by:

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Lancaster, PA 17601

Prepared for:

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

October 24, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 10/17/2013

Group Number: 1426982

SDG: PEM26

PO Number: B0086003.1301

State of Sample Origin: AR

Client Sample DescriptionLancaster Labs (LL) #

WS-014(1.5-2.0)101613 Filt Grab Surface Water	7239810
WS-014(5.5-6.0)101613 Filt Grab Surface Water	7239811
WS-012(1.5-2.0)101613 Filt Grab Surface Water	7239812
WS-012(5.0-5.5)101613 Filt Grab Surface Water	7239813
WS-010(1.5-2.0)101613 Filt Grab Surface Water	7239814
WS-010(3.5-4.0)101613 Filt Grab Surface Water	7239815
WS-006(0.5-1.0)101613 Filt Grab Surface Water	7239816
WS-005(Surface)101613 Filt Grab Surface Water	7239817
WS-011(1.5-2.0)101613 Filt Grab Surface Water	7239818
WS-011(5.5-6.0)101613 Filt Grab Surface Water	7239819
WS-002(Surface)101613 Filt Grab Surface Water	7239820
WS-018(Surface)101613 Filt Grab Surface Water	7239821
WS-003(Surface)101613 Filt Grab Surface Water	7239822
WS-007(0.5-1.0)101613 Filt Grab Surface Water	7239823
WS-001(0.5-1.0)101613 Filt Grab Surface Water	7239824
DUP-WS-103-101613 Filt Grab Surface Water	7239825
WS-EB-93-101613 Filt Grab Water	7239826

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

ELECTRONIC COPY TO
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

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1426982

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 not 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)101613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7239810
LL Group # 1426982
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/16/2013 08:20 by HVA

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

Submitted: 10/17/2013 09:30

Reported: 10/24/2013 06:34

1614F SDG#: PEM26-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0189	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
		SW-846 7470A	mg/l	mg/l	mg/l	
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	132901848003	10/23/2013 23:18	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132901848003	10/23/2013 23:18	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132901848003	10/23/2013 23:18	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132901848003	10/23/2013 23:18	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132901848003	10/23/2013 23:18	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132901848003	10/23/2013 23:18	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132901848003	10/23/2013 23:18	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132901848003	10/23/2013 23:18	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132901848003	10/23/2013 23:18	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132905713006	10/19/2013 14:26	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132901848003	10/20/2013 09:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132905713006	10/19/2013 08:50	Damary Valentin	1

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

Sample Description: WS-014(5.5-6.0)101613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7239811
LL Group # 1426982
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/16/2013 08:30 by HVA

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

Submitted: 10/17/2013 09:30

Reported: 10/24/2013 06:34

16F14 SDG#: PEM26-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0191	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
SW-846 6010B						
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
SW-846 7470A						

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	132901848003	10/23/2013 23:23	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132901848003	10/23/2013 23:23	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132901848003	10/23/2013 23:23	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132901848003	10/23/2013 23:23	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132901848003	10/23/2013 23:23	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132901848003	10/23/2013 23:23	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132901848003	10/23/2013 23:23	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132901848003	10/23/2013 23:23	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132901848003	10/23/2013 23:23	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132905713006	10/19/2013 14:34	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132901848003	10/20/2013 09:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132905713006	10/19/2013 08:50	Damary Valentin	1

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

Sample Description: WS-012(1.5-2.0)101613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7239812
LL Group # 1426982
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/16/2013 08:40 by HVA

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

Submitted: 10/17/2013 09:30

Reported: 10/24/2013 06:34

1612F SDG#: PEM26-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010B	mg/l	mg/l	mg/l	
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
		SW-846 7470A	mg/l	mg/l	mg/l	
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	132901848003	10/23/2013 23:35	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132901848003	10/23/2013 23:35	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132901848003	10/23/2013 23:35	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132901848003	10/23/2013 23:35	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132901848003	10/23/2013 23:35	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132901848003	10/23/2013 23:35	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132901848003	10/23/2013 23:35	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132901848003	10/23/2013 23:35	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132901848003	10/23/2013 23:35	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132905713006	10/19/2013 14:36	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132901848003	10/20/2013 09:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132905713006	10/19/2013 08:50	Damary Valentin	1

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

Sample Description: WS-012(5.0-5.5)101613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7239813
LL Group # 1426982
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/16/2013 08:50 by HVA

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

Submitted: 10/17/2013 09:30

Reported: 10/24/2013 06:34

16F12 SDG#: PEM26-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
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
SW-846 6010B						
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
SW-846 7470A						

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	132901848003	10/23/2013 23:39	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132901848003	10/23/2013 23:39	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132901848003	10/23/2013 23:39	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132901848003	10/23/2013 23:39	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132901848003	10/23/2013 23:39	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132901848003	10/23/2013 23:39	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132901848003	10/23/2013 23:39	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132901848003	10/23/2013 23:39	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132901848003	10/23/2013 23:39	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132905713006	10/19/2013 14:38	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132901848003	10/20/2013 09:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132905713006	10/19/2013 08:50	Damary Valentin	1

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

Sample Description: WS-010(1.5-2.0)101613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7239814
LL Group # 1426982
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/16/2013 09:10 by HVA

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

Submitted: 10/17/2013 09:30

Reported: 10/24/2013 06:34

1610F SDG#: PEM26-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0183	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
SW-846 6010B						
SW-846 7470A						
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	132901848003	10/23/2013 23:43	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132901848003	10/23/2013 23:43	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132901848003	10/23/2013 23:43	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132901848003	10/23/2013 23:43	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132901848003	10/23/2013 23:43	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132901848003	10/23/2013 23:43	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132901848003	10/23/2013 23:43	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132901848003	10/23/2013 23:43	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132901848003	10/23/2013 23:43	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132905713006	10/19/2013 14:40	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132901848003	10/20/2013 09:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132905713006	10/19/2013 08:50	Damary Valentin	1

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

Sample Description: WS-010(3.5-4.0)101613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7239815
LL Group # 1426982
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/16/2013 09:20 by HVA

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

Submitted: 10/17/2013 09:30

Reported: 10/24/2013 06:34

16F10 SDG#: PEM26-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0188	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
		SW-846 7470A	mg/l	mg/l	mg/l	
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	132901848003	10/23/2013 23:47	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132901848003	10/23/2013 23:47	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132901848003	10/23/2013 23:47	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132901848003	10/23/2013 23:47	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132901848003	10/23/2013 23:47	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132901848003	10/23/2013 23:47	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132901848003	10/23/2013 23:47	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132901848003	10/23/2013 23:47	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132901848003	10/23/2013 23:47	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132905713006	10/19/2013 14:47	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132901848003	10/20/2013 09:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132905713006	10/19/2013 08:50	Damary Valentin	1

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

Sample Description: WS-006(0.5-1.0)101613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7239816
LL Group # 1426982
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/16/2013 09:40 by HVA

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

Submitted: 10/17/2013 09:30

Reported: 10/24/2013 06:34

1606F SDG#: PEM26-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0185	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
		SW-846 7470A	mg/l	mg/l	mg/l	
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	132901848003	10/23/2013 22:54	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132901848003	10/23/2013 22:54	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132901848003	10/23/2013 22:54	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132901848003	10/23/2013 22:54	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132901848003	10/23/2013 22:54	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132901848003	10/23/2013 22:54	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132901848003	10/23/2013 22:54	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132901848003	10/23/2013 22:54	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132901848003	10/23/2013 22:54	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132905713006	10/19/2013 14:49	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132901848003	10/20/2013 09:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132905713006	10/19/2013 08:50	Damary Valentin	1

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

Sample Description: WS-005(Surface)101613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7239817
LL Group # 1426982
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/16/2013 10:00 by HVA

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

Submitted: 10/17/2013 09:30

Reported: 10/24/2013 06:34

1605F SDG#: PEM26-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0213	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
		SW-846 7470A	mg/l	mg/l	mg/l	
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	132901848003	10/23/2013 23:51	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132901848003	10/23/2013 23:51	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132901848003	10/23/2013 23:51	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132901848003	10/23/2013 23:51	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132901848003	10/23/2013 23:51	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132901848003	10/23/2013 23:51	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132901848003	10/23/2013 23:51	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132901848003	10/23/2013 23:51	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132901848003	10/23/2013 23:51	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132905713006	10/19/2013 14:51	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132901848003	10/20/2013 09:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132905713006	10/19/2013 08:50	Damary Valentin	1

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

Sample Description: WS-011(1.5-2.0)101613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7239818
LL Group # 1426982
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/16/2013 10:40 by HVA

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

Submitted: 10/17/2013 09:30

Reported: 10/24/2013 06:34

1611F SDG#: PEM26-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0212	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
		SW-846 7470A	mg/l	mg/l	mg/l	
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	132901848003	10/23/2013 23:55	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132901848003	10/23/2013 23:55	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132901848003	10/23/2013 23:55	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132901848003	10/23/2013 23:55	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132901848003	10/23/2013 23:55	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132901848003	10/23/2013 23:55	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132901848003	10/23/2013 23:55	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132901848003	10/23/2013 23:55	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132901848003	10/23/2013 23:55	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132905713006	10/19/2013 14:53	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132901848003	10/20/2013 09:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132905713006	10/19/2013 08:50	Damary Valentin	1

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

Sample Description: WS-011(5.5-6.0)101613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7239819
LL Group # 1426982
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/16/2013 10:50 by HVA

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

Submitted: 10/17/2013 09:30

Reported: 10/24/2013 06:34

16F11 SDG#: PEM26-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0215	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
		SW-846 7470A	mg/l	mg/l	mg/l	
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	132901848003	10/23/2013 23:59	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132901848003	10/23/2013 23:59	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132901848003	10/23/2013 23:59	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132901848003	10/23/2013 23:59	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132901848003	10/23/2013 23:59	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132901848003	10/23/2013 23:59	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132901848003	10/23/2013 23:59	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132901848003	10/23/2013 23:59	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132901848003	10/23/2013 23:59	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132905713006	10/19/2013 14:55	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132901848003	10/20/2013 09:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132905713006	10/19/2013 08:50	Damary Valentin	1

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

Sample Description: WS-002(Surface)101613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7239820
LL Group # 1426982
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/16/2013 11:10 by HVA

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

Submitted: 10/17/2013 09:30

Reported: 10/24/2013 06:34

1602F SDG#: PEM26-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0186	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
		SW-846 7470A	mg/l	mg/l	mg/l	
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	132901848003	10/24/2013 00:04	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132901848003	10/24/2013 00:04	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132901848003	10/24/2013 00:04	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132901848003	10/24/2013 00:04	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132901848003	10/24/2013 00:04	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132901848003	10/24/2013 00:04	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132901848003	10/24/2013 00:04	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132901848003	10/24/2013 00:04	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132901848003	10/24/2013 00:04	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132905713006	10/19/2013 14:57	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132901848003	10/20/2013 09:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132905713006	10/19/2013 08:50	Damary Valentin	1

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

Sample Description: WS-018(Surface)101613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7239821
LL Group # 1426982
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/16/2013 11:50 by HVA

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

Submitted: 10/17/2013 09:30

Reported: 10/24/2013 06:34

1618F SDG#: PEM26-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0311	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
		SW-846 7470A	mg/l	mg/l	mg/l	
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	132901848003	10/24/2013 00:08	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132901848003	10/24/2013 00:08	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132901848003	10/24/2013 00:08	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132901848003	10/24/2013 00:08	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132901848003	10/24/2013 00:08	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132901848003	10/24/2013 00:08	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132901848003	10/24/2013 00:08	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132901848003	10/24/2013 00:08	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132901848003	10/24/2013 00:08	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132905713006	10/19/2013 14:59	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132901848003	10/20/2013 09:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132905713006	10/19/2013 08:50	Damary Valentin	1

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

Sample Description: WS-003(Surface)101613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7239822
LL Group # 1426982
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/16/2013 12:00 by HVA

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

Submitted: 10/17/2013 09:30

Reported: 10/24/2013 06:34

1603F SDG#: PEM26-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
07035	Arsenic	SW-846 6010B 7440-38-2	mg/l N.D.	mg/l 0.0068	mg/l 0.0200	1
07046	Barium	7440-39-3	0.0203	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
SW-846 7470A						
00259	Mercury	7439-97-6	mg/l N.D.	mg/l 0.000060	mg/l 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	132901848003	10/24/2013 00:12	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132901848003	10/24/2013 00:12	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132901848003	10/24/2013 00:12	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132901848003	10/24/2013 00:12	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132901848003	10/24/2013 00:12	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132901848003	10/24/2013 00:12	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132901848003	10/24/2013 00:12	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132901848003	10/24/2013 00:12	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132901848003	10/24/2013 00:12	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132905713006	10/19/2013 15:01	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132901848003	10/20/2013 09:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132905713006	10/19/2013 08:50	Damary Valentin	1

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

Sample Description: WS-007(0.5-1.0)101613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7239823
LL Group # 1426982
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/16/2013 12:40 by HVA

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

Submitted: 10/17/2013 09:30

Reported: 10/24/2013 06:34

1607F SDG#: PEM26-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0381	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
		SW-846 7470A	mg/l	mg/l	mg/l	
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	132901848003	10/24/2013 00:24	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132901848003	10/24/2013 00:24	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132901848003	10/24/2013 00:24	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132901848003	10/24/2013 00:24	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132901848003	10/24/2013 00:24	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132901848003	10/24/2013 00:24	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132901848003	10/24/2013 00:24	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132901848003	10/24/2013 00:24	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132901848003	10/24/2013 00:24	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132905713006	10/19/2013 15:03	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132901848003	10/20/2013 09:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132905713006	10/19/2013 08:50	Damary Valentin	1

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

Sample Description: WS-001(0.5-1.0)101613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7239824
LL Group # 1426982
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/16/2013 13:00 by HVA

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

Submitted: 10/17/2013 09:30

Reported: 10/24/2013 06:34

1601F SDG#: PEM26-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0170	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
		SW-846 7470A	mg/l	mg/l	mg/l	
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	132901848003	10/24/2013 00:28	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132901848003	10/24/2013 00:28	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132901848003	10/24/2013 00:28	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132901848003	10/24/2013 00:28	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132901848003	10/24/2013 00:28	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132901848003	10/24/2013 00:28	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132901848003	10/24/2013 00:28	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132901848003	10/24/2013 00:28	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132901848003	10/24/2013 00:28	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132905713006	10/19/2013 15:05	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132901848003	10/20/2013 09:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132905713006	10/19/2013 08:50	Damary Valentin	1

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

Sample Description: DUP-WS-103-101613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7239825
LL Group # 1426982
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/16/2013 by HVA

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

Submitted: 10/17/2013 09:30

Reported: 10/24/2013 06:34

16DUF SDG#: PEM26-16FD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0185	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
		SW-846 7470A	mg/l	mg/l	mg/l	
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	132901848003	10/24/2013 00:32	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132901848003	10/24/2013 00:32	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132901848003	10/24/2013 00:32	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132901848003	10/24/2013 00:32	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132901848003	10/24/2013 00:32	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132901848003	10/24/2013 00:32	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132901848003	10/24/2013 00:32	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132901848003	10/24/2013 00:32	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132901848003	10/24/2013 00:32	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132905713006	10/19/2013 15:11	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132901848003	10/20/2013 09:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132905713006	10/19/2013 08:50	Damary Valentin	1

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

Sample Description: WS-EB-93-101613 Filt Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7239826
LL Group # 1426982
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/16/2013 13:30 by HVA

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

Submitted: 10/17/2013 09:30

Reported: 10/24/2013 06:34

1693F SDG#: PEM26-17EB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010B	mg/l	mg/l	mg/l	
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
		SW-846 7470A	mg/l	mg/l	mg/l	
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	132901848003	10/24/2013 00:36	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132901848003	10/24/2013 00:36	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132901848003	10/24/2013 00:36	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132901848003	10/24/2013 00:36	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132901848003	10/24/2013 00:36	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132901848003	10/24/2013 00:36	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132901848003	10/24/2013 00:36	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132901848003	10/24/2013 00:36	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132901848003	10/24/2013 00:36	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132905713006	10/19/2013 15:13	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132901848003	10/20/2013 09:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132905713006	10/19/2013 08:50	Damary Valentin	1

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

Quality Control SummaryClient Name: ExxonMobil c/o Arcadis
Reported: 10/24/13 at 06:34 AM

Group Number: 1426982

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: 132901848003	Sample number(s): 7239810-7239826								
Arsenic	N.D.	0.0068	0.0200	mg/l	95		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	101		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	102		90-112		
Chromium	N.D.	0.0016	0.0150	mg/l	101		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	106		88-110		
Nickel	N.D.	0.0015	0.0100	mg/l	104		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	102		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	90		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	101		90-110		
Batch number: 132905713006	Sample number(s): 7239810-7239826								
Mercury	N.D.	0.00006	0.00020	mg/l	103		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: 132901848003	Sample number(s): 7239810-7239826 UNSPK: 7239816 BKG: 7239816								
Arsenic	101	102	81-123	0	20	N.D.	N.D.	0 (1)	20
Barium	105	104	78-118	0	20	0.0185	0.0184	0 (1)	20
Cadmium	104	103	83-116	0	20	N.D.	N.D.	0 (1)	20
Chromium	104	103	76-120	2	20	N.D.	N.D.	0 (1)	20
Lead	107	107	75-125	0	20	N.D.	N.D.	0 (1)	20
Nickel	105	105	86-115	0	20	N.D.	N.D.	0 (1)	20
Selenium	104	103	75-125	1	20	N.D.	N.D.	0 (1)	20
Silver	94	94	75-125	0	20	N.D.	N.D.	0 (1)	20
Vanadium	104	104	90-117	1	20	N.D.	N.D.	0 (1)	20
Batch number: 132905713006	Sample number(s): 7239810-7239826 UNSPK: 7239810 BKG: 7239810								
Mercury	102	104	80-120	3	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.

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only
Group # 1426982 Sample # 7239810-26
Instructions on reverse side correspond with circled numbers.

pg 1 of 2

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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 # 1426982

Sample # 7239810-26

Instructions on reverse side correspond with circled numbers.

pg 2 of 2

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 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 Affer / Daniel Mays</u>				Sediment ☐ Ground ☐ Surface ☒ Potable ☐ NPDES ☐ Air ☐ Water ☐ Oil ☐				Preservation Code H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other												Lab to filter and pressure diss. metals upon receipt	
Sample Identification				Total # of Containers				VOLs 8260B PAH 8270 SIM RORA Metals ^{hardness} N ₂ /N ₂ g Diss Metals HEM Oil & Grease													
Collected Date Time WS-003(surface) 10/6/13 1206 WS-007(0.5-1.0) 10/6/13 1240 WS-001(0.5-1.0) 10/6/13 1300 DUP-WS-103-10/6/13 10-16-13 — WS-EB-93-10/6/13 10-16-13 1330 WS-TB-178-10/6/13 10-16-13 —				Grab Composite Soil Water Oil				[Grid for analyses with handwritten 'X' marks]													
7 Turnaround Time Requested (TAT) (please circle) Standard <u>5 day</u> 4 day 72 hour 48 hour 24 hour				Relinquished by <u>Daniel Mays</u> Date <u>10-16-13</u> Time <u>1600</u> Relinquished by _____ Date _____ Time _____ Relinquished by _____ Date _____ Time _____				Received by _____ Date _____ Time _____ Received by _____ Date _____ Time _____ Received by _____ Date _____ Time _____				Received by <u>CEH</u> Date <u>10/17/13</u> Time <u>0930</u>				Temperature Upon Receipt <u>0.7-1.7</u> °C		Custody Seals Intact? <u>Yes</u> No			
8 Data Package (circle if required) Type I - Full Type VI (Raw Data) NJ Reduced Other _____				EDD (circle if required) Locus EIM (default) 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.

Environmental Sample Administration 1426982
Receipt Documentation LogClient/Project: MayflowerShipping Container Sealed: YES NODate of Receipt: 10/17/13Custody Seal Present *: YES NOTime of Receipt: 0930

* Custody seal was intact unless otherwise noted in the discrepancy section

Source Code: 60-1Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT121	1.0	TB	WI	Y	B	
2		0.8					
3		1.7					
4		1.2					
5		0.7					
6		0.7					

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

Paperwork Discrepancy/Unpacking Problems:

1 broken O+G jar for VS-014 (1.5-2.0) 10/16/13 @ 820 - Gr. 1421279Unpacker Signature/Emp#: C. Asher 3647 Date/Time: 10/17/13 1008

Issued by Dept. 6042 Management

Explanation of Symbols and Abbreviations

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

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry 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	
A	TIC is a possible aldol-condensation product	B	Value is $<$ CRDL, but $\geq$ IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns $>25\%$	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	Correlation coefficient for MSA <0.995

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

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

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

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

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