

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

August 27, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 08/22/2013

Group Number: 1413365

SDG: PEK92

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)082113 Filt Grab Surface Water	7170152
WS-014(5.5-6.0)082113 Filt Grab Surface Water	7170153
WS-012(1.5-2.0)082113 Filt Grab Surface Water	7170154
WS-012(5.0-5.5)082113 Filt Grab Surface Water	7170155
WS-010(1.5-2.0)082113 Filt Grab Surface Water	7170156
WS-010(3.5-4.0)082113 Filt Grab Surface Water	7170157
WS-006(0.5-1.0)082113 Filt Grab Surface Water	7170158
WS-005(Surface)082113 Filt Grab Surface Water	7170159
WS-002(Surface)082113 Filt Grab Surface Water	7170160
WS-018(Surface)082113 Filt Grab Surface Water	7170161
WS-011(1.5-2.0)082113 Filt Grab Surface Water	7170162
WS-011(5.0-5.5)082113 Filt Grab Surface Water	7170163
WS-003(Surface)082113 Filt Grab Surface Water	7170164
WS-007(0.5-1.0)082113 Filt Grab Surface Water	7170165
WS-001(0.5-1.0)082113 Filt Grab Surface Water	7170166
DUP-WS-74-082113 Filt Grab Surface Water	7170167
WS-EB-037-082113 Filt Grab Water	7170168

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
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ELECTRONIC	ExxonMobil	Attn: Carl Wideman
COPY TO		

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1413365

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.

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Sample Description: WS-014(1.5-2.0)082113 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7170152
LL Group # 1413365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/21/2013 09:00 by TM

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

Submitted: 08/22/2013 09:35

Reported: 08/27/2013 08:09

2114F SDG#: PEK92-01

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	0.0095	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	132341848003	08/26/2013 20:54	John P Hook	1
07046	Barium	SW-846 6010B	1	132341848003	08/26/2013 20:54	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132341848003	08/26/2013 20:54	John P Hook	1
07051	Chromium	SW-846 6010B	1	132341848003	08/26/2013 20:54	John P Hook	1
07055	Lead	SW-846 6010B	1	132341848003	08/26/2013 20:54	John P Hook	1
07061	Nickel	SW-846 6010B	1	132341848003	08/26/2013 20:54	John P Hook	1
07036	Selenium	SW-846 6010B	1	132341848003	08/26/2013 20:54	John P Hook	1
07066	Silver	SW-846 6010B	1	132341848003	08/26/2013 20:54	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132341848003	08/26/2013 20:54	John P Hook	1
00259	Mercury	SW-846 7470A	1	132355713003	08/25/2013 07:20	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132341848003	08/23/2013 06:05	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132355713003	08/24/2013 08:25	Damary Valentin	1

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

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Sample Description: WS-014(5.5-6.0)082113 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7170153
LL Group # 1413365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/21/2013 09:10 by TM

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

Submitted: 08/22/2013 09:35

Reported: 08/27/2013 08:09

21F14 SDG#: PEK92-02

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	0.0149	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	132341848003	08/26/2013 20:58	John P Hook	1
07046	Barium	SW-846 6010B	1	132341848003	08/26/2013 20:58	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132341848003	08/26/2013 20:58	John P Hook	1
07051	Chromium	SW-846 6010B	1	132341848003	08/26/2013 20:58	John P Hook	1
07055	Lead	SW-846 6010B	1	132341848003	08/26/2013 20:58	John P Hook	1
07061	Nickel	SW-846 6010B	1	132341848003	08/26/2013 20:58	John P Hook	1
07036	Selenium	SW-846 6010B	1	132341848003	08/26/2013 20:58	John P Hook	1
07066	Silver	SW-846 6010B	1	132341848003	08/26/2013 20:58	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132341848003	08/26/2013 20:58	John P Hook	1
00259	Mercury	SW-846 7470A	1	132355713003	08/25/2013 07:28	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132341848003	08/23/2013 06:05	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132355713003	08/24/2013 08:25	Damary Valentin	1

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

Sample Description: WS-012(1.5-2.0)082113 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7170154
LL Group # 1413365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/21/2013 09:30 by TM

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

Submitted: 08/22/2013 09:35

Reported: 08/27/2013 08:09

2112F SDG#: PEK92-03

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	0.0137	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	132341848003	08/26/2013 21:09	John P Hook	1
07046	Barium	SW-846 6010B	1	132341848003	08/26/2013 21:09	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132341848003	08/26/2013 21:09	John P Hook	1
07051	Chromium	SW-846 6010B	1	132341848003	08/26/2013 21:09	John P Hook	1
07055	Lead	SW-846 6010B	1	132341848003	08/26/2013 21:09	John P Hook	1
07061	Nickel	SW-846 6010B	1	132341848003	08/26/2013 21:09	John P Hook	1
07036	Selenium	SW-846 6010B	1	132341848003	08/26/2013 21:09	John P Hook	1
07066	Silver	SW-846 6010B	1	132341848003	08/26/2013 21:09	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132341848003	08/26/2013 21:09	John P Hook	1
00259	Mercury	SW-846 7470A	1	132355713003	08/25/2013 07:30	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132341848003	08/23/2013 06:05	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132355713003	08/24/2013 08:25	Damary Valentin	1

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

Sample Description: WS-012(5.0-5.5)082113 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7170155
LL Group # 1413365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/21/2013 09:40 by TM

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

Submitted: 08/22/2013 09:35

Reported: 08/27/2013 08:09

21F12 SDG#: PEK92-04

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	0.0218	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	132341848003	08/26/2013 21:13	John P Hook	1
07046	Barium	SW-846 6010B	1	132341848003	08/26/2013 21:13	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132341848003	08/26/2013 21:13	John P Hook	1
07051	Chromium	SW-846 6010B	1	132341848003	08/26/2013 21:13	John P Hook	1
07055	Lead	SW-846 6010B	1	132341848003	08/26/2013 21:13	John P Hook	1
07061	Nickel	SW-846 6010B	1	132341848003	08/26/2013 21:13	John P Hook	1
07036	Selenium	SW-846 6010B	1	132341848003	08/26/2013 21:13	John P Hook	1
07066	Silver	SW-846 6010B	1	132341848003	08/26/2013 21:13	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132341848003	08/26/2013 21:13	John P Hook	1
00259	Mercury	SW-846 7470A	1	132355713003	08/25/2013 07:36	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132341848003	08/23/2013 06:05	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132355713003	08/24/2013 08:25	Damary Valentin	1

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

Sample Description: WS-010(1.5-2.0)082113 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7170156
LL Group # 1413365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/21/2013 09:55 by TM

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

Submitted: 08/22/2013 09:35

Reported: 08/27/2013 08:09

2110F SDG#: PEK92-05

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	0.0119	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	132341848003	08/26/2013 21:17	John P Hook	1
07046	Barium	SW-846 6010B	1	132341848003	08/26/2013 21:17	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132341848003	08/26/2013 21:17	John P Hook	1
07051	Chromium	SW-846 6010B	1	132341848003	08/26/2013 21:17	John P Hook	1
07055	Lead	SW-846 6010B	1	132341848003	08/26/2013 21:17	John P Hook	1
07061	Nickel	SW-846 6010B	1	132341848003	08/26/2013 21:17	John P Hook	1
07036	Selenium	SW-846 6010B	1	132341848003	08/26/2013 21:17	John P Hook	1
07066	Silver	SW-846 6010B	1	132341848003	08/26/2013 21:17	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132341848003	08/26/2013 21:17	John P Hook	1
00259	Mercury	SW-846 7470A	1	132355713003	08/25/2013 07:38	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132341848003	08/23/2013 06:05	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132355713003	08/24/2013 08:25	Damary Valentin	1

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

Sample Description: WS-010(3.5-4.0)082113 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7170157
LL Group # 1413365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/21/2013 10:00 by TM

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

Submitted: 08/22/2013 09:35

Reported: 08/27/2013 08:09

21F10 SDG#: PEK92-06

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	0.0408	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	132341848003	08/26/2013 21:21	John P Hook	1
07046	Barium	SW-846 6010B	1	132341848003	08/26/2013 21:21	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132341848003	08/26/2013 21:21	John P Hook	1
07051	Chromium	SW-846 6010B	1	132341848003	08/26/2013 21:21	John P Hook	1
07055	Lead	SW-846 6010B	1	132341848003	08/26/2013 21:21	John P Hook	1
07061	Nickel	SW-846 6010B	1	132341848003	08/26/2013 21:21	John P Hook	1
07036	Selenium	SW-846 6010B	1	132341848003	08/26/2013 21:21	John P Hook	1
07066	Silver	SW-846 6010B	1	132341848003	08/26/2013 21:21	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132341848003	08/26/2013 21:21	John P Hook	1
00259	Mercury	SW-846 7470A	1	132355713003	08/25/2013 07:41	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132341848003	08/23/2013 06:05	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132355713003	08/24/2013 08:25	Damary Valentin	1

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

Sample Description: WS-006(0.5-1.0)082113 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7170158
LL Group # 1413365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/21/2013 10:15 by TM

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

Submitted: 08/22/2013 09:35

Reported: 08/27/2013 08:09

2106F SDG#: PEK92-07

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	0.0111	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	132341848003	08/26/2013 20:31	John P Hook	1
07046	Barium	SW-846 6010B	1	132341848003	08/26/2013 20:31	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132341848003	08/26/2013 20:31	John P Hook	1
07051	Chromium	SW-846 6010B	1	132341848003	08/26/2013 20:31	John P Hook	1
07055	Lead	SW-846 6010B	1	132341848003	08/26/2013 20:31	John P Hook	1
07061	Nickel	SW-846 6010B	1	132341848003	08/26/2013 20:31	John P Hook	1
07036	Selenium	SW-846 6010B	1	132341848003	08/26/2013 20:31	John P Hook	1
07066	Silver	SW-846 6010B	1	132341848003	08/26/2013 20:31	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132341848003	08/26/2013 20:31	John P Hook	1
00259	Mercury	SW-846 7470A	1	132355713003	08/25/2013 07:43	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132341848003	08/23/2013 06:05	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132355713003	08/24/2013 08:25	Damary Valentin	1

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

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

Sample Description: WS-005 (Surface) 082113 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7170159
LL Group # 1413365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/21/2013 10:50 by TM

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

Submitted: 08/22/2013 09:35

Reported: 08/27/2013 08:09

2105F SDG#: PEK92-08

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	0.0206	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	0.0016 J	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	132341848003	08/26/2013 21:24	John P Hook	1
07046	Barium	SW-846 6010B	1	132341848003	08/26/2013 21:24	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132341848003	08/26/2013 21:24	John P Hook	1
07051	Chromium	SW-846 6010B	1	132341848003	08/26/2013 21:24	John P Hook	1
07055	Lead	SW-846 6010B	1	132341848003	08/26/2013 21:24	John P Hook	1
07061	Nickel	SW-846 6010B	1	132341848003	08/26/2013 21:24	John P Hook	1
07036	Selenium	SW-846 6010B	1	132341848003	08/26/2013 21:24	John P Hook	1
07066	Silver	SW-846 6010B	1	132341848003	08/26/2013 21:24	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132341848003	08/26/2013 21:24	John P Hook	1
00259	Mercury	SW-846 7470A	1	132355713003	08/25/2013 07:45	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132341848003	08/23/2013 06:05	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132355713003	08/24/2013 08:25	Damary Valentin	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) 082113 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7170160
LL Group # 1413365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/21/2013 11:25 by TM

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

Submitted: 08/22/2013 09:35

Reported: 08/27/2013 08:09

2102F SDG#: PEK92-09

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	0.0078	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	132341848003	08/26/2013 21:28	John P Hook	1
07046	Barium	SW-846 6010B	1	132341848003	08/26/2013 21:28	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132341848003	08/26/2013 21:28	John P Hook	1
07051	Chromium	SW-846 6010B	1	132341848003	08/26/2013 21:28	John P Hook	1
07055	Lead	SW-846 6010B	1	132341848003	08/26/2013 21:28	John P Hook	1
07061	Nickel	SW-846 6010B	1	132341848003	08/26/2013 21:28	John P Hook	1
07036	Selenium	SW-846 6010B	1	132341848003	08/26/2013 21:28	John P Hook	1
07066	Silver	SW-846 6010B	1	132341848003	08/26/2013 21:28	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132341848003	08/26/2013 21:28	John P Hook	1
00259	Mercury	SW-846 7470A	1	132355713003	08/25/2013 07:47	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132341848003	08/23/2013 06:05	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132355713003	08/24/2013 08:25	Damary Valentin	1

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

Sample Description: WS-018 (Surface) 082113 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7170161
LL Group # 1413365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/21/2013 11:45 by TM

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

Submitted: 08/22/2013 09:35

Reported: 08/27/2013 08:09

2118F SDG#: PEK92-10

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	0.0198	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	132341848003	08/26/2013 21:32	John P Hook	1
07046	Barium	SW-846 6010B	1	132341848003	08/26/2013 21:32	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132341848003	08/26/2013 21:32	John P Hook	1
07051	Chromium	SW-846 6010B	1	132341848003	08/26/2013 21:32	John P Hook	1
07055	Lead	SW-846 6010B	1	132341848003	08/26/2013 21:32	John P Hook	1
07061	Nickel	SW-846 6010B	1	132341848003	08/26/2013 21:32	John P Hook	1
07036	Selenium	SW-846 6010B	1	132341848003	08/26/2013 21:32	John P Hook	1
07066	Silver	SW-846 6010B	1	132341848003	08/26/2013 21:32	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132341848003	08/26/2013 21:32	John P Hook	1
00259	Mercury	SW-846 7470A	1	132355713003	08/25/2013 07:49	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132341848003	08/23/2013 06:05	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132355713003	08/24/2013 08:25	Damary Valentin	1

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

Sample Description: WS-011(1.5-2.0)082113 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7170162
LL Group # 1413365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/21/2013 12:00 by TM

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

Submitted: 08/22/2013 09:35

Reported: 08/27/2013 08:09

2111F SDG#: PEK92-11

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	0.0077	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	132341848003	08/26/2013 21:36	John P Hook	1
07046	Barium	SW-846 6010B	1	132341848003	08/26/2013 21:36	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132341848003	08/26/2013 21:36	John P Hook	1
07051	Chromium	SW-846 6010B	1	132341848003	08/26/2013 21:36	John P Hook	1
07055	Lead	SW-846 6010B	1	132341848003	08/26/2013 21:36	John P Hook	1
07061	Nickel	SW-846 6010B	1	132341848003	08/26/2013 21:36	John P Hook	1
07036	Selenium	SW-846 6010B	1	132341848003	08/26/2013 21:36	John P Hook	1
07066	Silver	SW-846 6010B	1	132341848003	08/26/2013 21:36	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132341848003	08/26/2013 21:36	John P Hook	1
00259	Mercury	SW-846 7470A	1	132355713003	08/25/2013 07:51	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132341848003	08/23/2013 06:05	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132355713003	08/24/2013 08:25	Damary Valentin	1

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

Sample Description: WS-011(5.0-5.5)082113 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7170163
LL Group # 1413365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/21/2013 12:05 by TM

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

Submitted: 08/22/2013 09:35

Reported: 08/27/2013 08:09

21F11 SDG#: PEK92-12

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	0.0159	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	132341848003	08/26/2013 21:40	John P Hook	1
07046	Barium	SW-846 6010B	1	132341848003	08/26/2013 21:40	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132341848003	08/26/2013 21:40	John P Hook	1
07051	Chromium	SW-846 6010B	1	132341848003	08/26/2013 21:40	John P Hook	1
07055	Lead	SW-846 6010B	1	132341848003	08/26/2013 21:40	John P Hook	1
07061	Nickel	SW-846 6010B	1	132341848003	08/26/2013 21:40	John P Hook	1
07036	Selenium	SW-846 6010B	1	132341848003	08/26/2013 21:40	John P Hook	1
07066	Silver	SW-846 6010B	1	132341848003	08/26/2013 21:40	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132341848003	08/26/2013 21:40	John P Hook	1
00259	Mercury	SW-846 7470A	1	132355713003	08/25/2013 07:53	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132341848003	08/23/2013 06:05	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132355713003	08/24/2013 08:25	Damary Valentin	1

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

Sample Description: WS-003 (Surface) 082113 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7170164
LL Group # 1413365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/21/2013 12:30 by TM

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

Submitted: 08/22/2013 09:35

Reported: 08/27/2013 08:09

2103F SDG#: PEK92-13

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	0.0050 J	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	132341848003	08/26/2013 21:43	John P Hook	1
07046	Barium	SW-846 6010B	1	132341848003	08/26/2013 21:43	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132341848003	08/26/2013 21:43	John P Hook	1
07051	Chromium	SW-846 6010B	1	132341848003	08/26/2013 21:43	John P Hook	1
07055	Lead	SW-846 6010B	1	132341848003	08/26/2013 21:43	John P Hook	1
07061	Nickel	SW-846 6010B	1	132341848003	08/26/2013 21:43	John P Hook	1
07036	Selenium	SW-846 6010B	1	132341848003	08/26/2013 21:43	John P Hook	1
07066	Silver	SW-846 6010B	1	132341848003	08/26/2013 21:43	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132341848003	08/26/2013 21:43	John P Hook	1
00259	Mercury	SW-846 7470A	1	132355713003	08/25/2013 07:55	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132341848003	08/23/2013 06:05	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132355713003	08/24/2013 08:25	Damary Valentin	1

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

Sample Description: WS-007(0.5-1.0)082113 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7170165
LL Group # 1413365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/21/2013 12:45 by TM

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

Submitted: 08/22/2013 09:35

Reported: 08/27/2013 08:09

2107F SDG#: PEK92-14

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	0.0152	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	132341848003	08/26/2013 21:55	John P Hook	1
07046	Barium	SW-846 6010B	1	132341848003	08/26/2013 21:55	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132341848003	08/26/2013 21:55	John P Hook	1
07051	Chromium	SW-846 6010B	1	132341848003	08/26/2013 21:55	John P Hook	1
07055	Lead	SW-846 6010B	1	132341848003	08/26/2013 21:55	John P Hook	1
07061	Nickel	SW-846 6010B	1	132341848003	08/26/2013 21:55	John P Hook	1
07036	Selenium	SW-846 6010B	1	132341848003	08/26/2013 21:55	John P Hook	1
07066	Silver	SW-846 6010B	1	132341848003	08/26/2013 21:55	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132341848003	08/26/2013 21:55	John P Hook	1
00259	Mercury	SW-846 7470A	1	132355713003	08/25/2013 08:01	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132341848003	08/23/2013 06:05	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132355713003	08/24/2013 08:25	Damary Valentin	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-001(0.5-1.0)082113 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7170166
LL Group # 1413365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/21/2013 13:00 by TM

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

Submitted: 08/22/2013 09:35

Reported: 08/27/2013 08:09

2101F SDG#: PEK92-15

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	0.0091	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	132341848003	08/26/2013 21:59	John P Hook	1
07046	Barium	SW-846 6010B	1	132341848003	08/26/2013 21:59	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132341848003	08/26/2013 21:59	John P Hook	1
07051	Chromium	SW-846 6010B	1	132341848003	08/26/2013 21:59	John P Hook	1
07055	Lead	SW-846 6010B	1	132341848003	08/26/2013 21:59	John P Hook	1
07061	Nickel	SW-846 6010B	1	132341848003	08/26/2013 21:59	John P Hook	1
07036	Selenium	SW-846 6010B	1	132341848003	08/26/2013 21:59	John P Hook	1
07066	Silver	SW-846 6010B	1	132341848003	08/26/2013 21:59	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132341848003	08/26/2013 21:59	John P Hook	1
00259	Mercury	SW-846 7470A	1	132355713003	08/25/2013 08:03	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132341848003	08/23/2013 06:05	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132355713003	08/24/2013 08:25	Damary Valentin	1

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

Sample Description: DUP-WS-74-082113 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7170167
LL Group # 1413365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/21/2013 by TM

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

Submitted: 08/22/2013 09:35

Reported: 08/27/2013 08:09

2174F SDG#: PEK92-16FD

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	0.0108	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
		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	132341848003	08/26/2013 22:02	John P Hook	1
07046	Barium	SW-846 6010B	1	132341848003	08/26/2013 22:02	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132341848003	08/26/2013 22:02	John P Hook	1
07051	Chromium	SW-846 6010B	1	132341848003	08/26/2013 22:02	John P Hook	1
07055	Lead	SW-846 6010B	1	132341848003	08/26/2013 22:02	John P Hook	1
07061	Nickel	SW-846 6010B	1	132341848003	08/26/2013 22:02	John P Hook	1
07036	Selenium	SW-846 6010B	1	132341848003	08/26/2013 22:02	John P Hook	1
07066	Silver	SW-846 6010B	1	132341848003	08/26/2013 22:02	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132341848003	08/26/2013 22:02	John P Hook	1
00259	Mercury	SW-846 7470A	1	132355713003	08/25/2013 08:05	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132341848003	08/23/2013 06:05	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132355713003	08/24/2013 08:25	Damary Valentin	1

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

Sample Description: **WS-EB-037-082113 Filt Grab Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7170168**
 LL Group # **1413365**
 Account # **14739**

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

Collected: 08/21/2013 13:45 by TM

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

Submitted: 08/22/2013 09:35

Reported: 08/27/2013 08:09

2137F SDG#: PEK92-17EB*

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	0.0041 J	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	132341848003	08/26/2013 22:06	John P Hook	1
07046	Barium	SW-846 6010B	1	132341848003	08/26/2013 22:06	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132341848003	08/26/2013 22:06	John P Hook	1
07051	Chromium	SW-846 6010B	1	132341848003	08/26/2013 22:06	John P Hook	1
07055	Lead	SW-846 6010B	1	132341848003	08/26/2013 22:06	John P Hook	1
07061	Nickel	SW-846 6010B	1	132341848003	08/26/2013 22:06	John P Hook	1
07036	Selenium	SW-846 6010B	1	132341848003	08/26/2013 22:06	John P Hook	1
07066	Silver	SW-846 6010B	1	132341848003	08/26/2013 22:06	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132341848003	08/26/2013 22:06	John P Hook	1
00259	Mercury	SW-846 7470A	1	132355713003	08/25/2013 08:07	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132341848003	08/23/2013 06:05	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132355713003	08/24/2013 08:25	Damary Valentin	1

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 08/27/13 at 08:09 AM

Group Number: 1413365

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: 132341848003	Sample number(s): 7170152-7170168								
Arsenic	N.D.	0.0068	0.0200	mg/l	100		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	100		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	98		90-112		
Chromium	N.D.	0.0016	0.0150	mg/l	99		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	99		88-110		
Nickel	N.D.	0.0015	0.0100	mg/l	102		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	99		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	106		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	101		90-110		
Batch number: 132355713003	Sample number(s): 7170152-7170168								
Mercury	N.D.	0.00006	0.00020	mg/l	110		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: 132341848003	Sample number(s): 7170152-7170168 UNSPK: 7170158 BKG: 7170158								
Arsenic	103	103	81-123	0	20	N.D.	N.D.	0 (1)	20
Barium	101	102	78-118	1	20	0.0111	0.0111	0 (1)	20
Cadmium	100	100	83-116	0	20	N.D.	N.D.	0 (1)	20
Chromium	100	102	81-120	2	20	N.D.	N.D.	0 (1)	20
Lead	99	99	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	100	100	75-125	0	20	N.D.	N.D.	0 (1)	20
Silver	108	110	75-125	2	20	N.D.	N.D.	0 (1)	20
Vanadium	102	105	90-111	3	20	N.D.	N.D.	0 (1)	20
Batch number: 132355713003	Sample number(s): 7170152-7170168 UNSPK: 7170152 BKG: 7170152								
Mercury	109	107	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.

Environmental Sample Administration 1413365
Receipt Documentation Log

Client/Project: Mayflower Waters

Shipping Container Sealed: YES NO

Date of Receipt: 8/22/13

Custody Seal Present * : YES NO

Time of Receipt: 0935

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

Source Code: 60-1

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT121	0.6	TB	WI	Y	B	
2	↓	0.8	↓	↓	↓	↓	
3	↓	0.8	↓	↓	↓	↓	
4	↓	3.0	↓	↓	↓	↓	
5	↓	1.1	↓	↓	↓	↓	
6	↓	2.7	↓	↓	↓	↓	

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: Cashler 3647 Date/Time: 8/22/13 1028

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 limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

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

ppb parts per billion

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

Data Qualifiers:

C – result confirmed by reanalysis.

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

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

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

Inorganic Qualifiers

- B** Value is $<$ CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike sample not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- *** Duplicate analysis not within control limits
- +** Correlation coefficient for MSA <0.995

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

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

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

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

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