

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 29, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 08/26/2013

Group Number: 1414252

SDG: PEL05

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)082413 Filt Grab Surface Water	7174883
WS-014(5.5-6.0)082413 Filt Grab Surface Water	7174884
WS-012(1.5-2.0)082413 Filt Grab Surface Water	7174885
WS-012(5.0-5.5)082413 Filt Grab Surface Water	7174886
WS-010(1.5-2.0)082413 Filt Grab Surface Water	7174887
WS-010(3.5-4.0)082413 Filt Grab Surface Water	7174888
WS-006(0.5-1.0)082413 Filt Grab Surface Water	7174889
WS-006(0.5-1.0)082413MS Filt Grab Surface Water	7174890
WS-006(0.5-1.0)082413MSD Filt Grab Surface Water	7174891
WS-006(0.5-1.0)082413DUP Filt Grab Surface Water	7174892
WS-005(Surface)082413 Filt Grab Surface Water	7174893
WS-002(Surface)082413 Filt Grab Surface Water	7174894
WS-018(Surface)082413 Filt Grab Surface Water	7174895
WS-011(1.5-2.0)082413 Filt Grab Surface Water	7174896
WS-011(5.0-5.5)082413 Filt Grab Surface Water	7174897
WS-003(Surface)082413 Filt Grab Surface Water	7174898
WS-007(0.5-1.0)082413 Filt Grab Surface Water	7174899
WS-001(0.5-1.0)082413 Filt Grab Surface Water	7174900
WS-EB-040-082413 Filt Grab Water	7174901
WS-014(1.5-2.0)082513 Filt Grab Surface Water	7174902
WS-014(5.5-6.0)082513 Filt Grab Surface Water	7174903
WS-012(1.5-2.0)082513 Filt Grab Surface Water	7174904
WS-012(5.0-5.5)082513 Filt Grab Surface Water	7174905
WS-010(1.5-2.0)082513 Filt Grab Surface Water	7174906
WS-010(3.5-4.0)082513 Filt Grab Surface Water	7174907
WS-006(0.5-1.0)082513 Filt Grab Surface Water	7174908

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
ELECTRONIC COPY TO	ARCADIS	Attn: Rhiannon Parmalee
ELECTRONIC COPY TO	ARCADIS	Attn: Jamie Pritchard
ELECTRONIC COPY TO	ExxonMobil	Attn: Michael L Sixsmith
ELECTRONIC COPY TO	ExxonMobil	Attn: Julie Foster
ELECTRONIC COPY TO	ExxonMobil	Attn: Carl Wideman

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1414252

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

No additional comments are necessary.

Sample Description: WS-014(1.5-2.0)082413 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174883
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/24/2013 08:55 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F141- SDG#: PEL05-01

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	0.0088	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	132381848003	08/28/2013 14:36	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/27/2013 23:44	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/27/2013 23:44	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/27/2013 23:44	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 14:36	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/27/2013 23:44	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/27/2013 23:44	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/27/2013 23:44	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/27/2013 23:44	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 09:45	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

Sample Description: WS-014(5.5-6.0)082413 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174884
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/24/2013 09:05 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F145- SDG#: PEL05-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0086	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			mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
SW-846 7470A			mg/l	mg/l	mg/l	

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	132381848003	08/28/2013 14:40	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/27/2013 23:48	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/27/2013 23:48	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/27/2013 23:48	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 14:40	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/27/2013 23:48	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/27/2013 23:48	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/27/2013 23:48	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/27/2013 23:48	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 09:47	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

Sample Description: WS-012(1.5-2.0)082413 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174885
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/24/2013 09:20 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F121- SDG#: PEL05-03

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	0.0104	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	132381848003	08/28/2013 14:52	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/28/2013 00:00	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/28/2013 00:00	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/28/2013 00:00	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 14:52	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/28/2013 00:00	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/28/2013 00:00	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/28/2013 00:00	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/28/2013 00:00	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 09:49	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

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Sample Description: WS-012(5.0-5.5)082413 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174886
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/24/2013 09:25 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F125- SDG#: PEL05-04

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	0.0128	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	132381848003	08/28/2013 14:55	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/28/2013 00:04	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/28/2013 00:04	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/28/2013 00:04	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 14:55	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/28/2013 00:04	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/28/2013 00:04	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/28/2013 00:04	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/28/2013 00:04	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 09:51	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

Sample Description: WS-010(1.5-2.0)082413 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174887
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/24/2013 09:40 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F101- SDG#: PEL05-05

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	0.0114	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	132381848003	08/28/2013 14:59	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/28/2013 00:08	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/28/2013 00:08	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/28/2013 00:08	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 14:59	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/28/2013 00:08	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/28/2013 00:08	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/28/2013 00:08	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/28/2013 00:08	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 09:53	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

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Sample Description: WS-010(3.5-4.0)082413 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174888
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/24/2013 09:50 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F103- SDG#: PEL05-06

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	0.0265	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	132381848003	08/28/2013 15:03	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/28/2013 00:12	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/28/2013 00:12	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/28/2013 00:12	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 15:03	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/28/2013 00:12	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/28/2013 00:12	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/28/2013 00:12	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/28/2013 00:12	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 09:55	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

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Sample Description: WS-006(0.5-1.0)082413 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174889
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/24/2013 10:05 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F060- SDG#: PEL05-07BKG

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	0.0125	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	132381848003	08/28/2013 14:13	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/27/2013 23:19	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/27/2013 23:19	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/27/2013 23:19	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 14:13	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/27/2013 23:19	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/27/2013 23:19	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/27/2013 23:19	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/27/2013 23:19	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 09:58	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

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Sample Description: WS-006(0.5-1.0)082413MS Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174890
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/24/2013 10:05 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F060- SDG#: PEL05-07MS

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	0.149	0.0068	0.0200	1
07046	Barium	7440-39-3	2.05	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0513	0.00076	0.0050	1
07051	Chromium	7440-47-3	0.204	0.0016	0.0150	1
07055	Lead	7439-92-1	0.141	0.0047	0.0150	1
07061	Nickel	7440-02-0	0.520	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.149	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0453	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.514	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.0010	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132381848003	08/28/2013 14:25	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/27/2013 23:31	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/27/2013 23:31	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/27/2013 23:31	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 14:25	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/27/2013 23:31	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/27/2013 23:31	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/27/2013 23:31	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/27/2013 23:31	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 10:02	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

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Sample Description: WS-006(0.5-1.0)082413MSD Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174891
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/24/2013 10:05 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F060- SDG#: PEL05-07MSD

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	0.153	0.0068	0.0200	1
07046	Barium	7440-39-3	2.06	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0515	0.00076	0.0050	1
07051	Chromium	7440-47-3	0.204	0.0016	0.0150	1
07055	Lead	7439-92-1	0.144	0.0047	0.0150	1
07061	Nickel	7440-02-0	0.524	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.148	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0454	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.516	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.0010	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132381848003	08/28/2013 14:29	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/27/2013 23:35	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/27/2013 23:35	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/27/2013 23:35	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 14:29	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/27/2013 23:35	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/27/2013 23:35	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/27/2013 23:35	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/27/2013 23:35	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 10:08	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

Sample Description: WS-006(0.5-1.0)082413DUP Filtr Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174892
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/24/2013 10:05 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F060- SDG#: PEL05-07DUP

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	0.0125	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	132381848003	08/28/2013 14:21	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/27/2013 23:27	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/27/2013 23:27	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/27/2013 23:27	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 14:21	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/27/2013 23:27	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/27/2013 23:27	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/27/2013 23:27	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/27/2013 23:27	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 10:00	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

Sample Description: WS-005 (Surface) 082413 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174893
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/24/2013 10:55 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F05S- SDG#: PEL05-08

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	0.0137	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	132381848003	08/28/2013 15:07	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/28/2013 00:17	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/28/2013 00:17	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/28/2013 00:17	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 15:07	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/28/2013 00:17	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/28/2013 00:17	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/28/2013 00:17	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/28/2013 00:17	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 10:10	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

Sample Description: WS-002 (Surface) 082413 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174894
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/24/2013 11:20 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F02S- SDG#: PEL05-09

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	0.0106	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	132381848003	08/28/2013 15:11	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/28/2013 00:21	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/28/2013 00:21	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/28/2013 00:21	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 15:11	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/28/2013 00:21	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/28/2013 00:21	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/28/2013 00:21	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/28/2013 00:21	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 10:12	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

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Sample Description: **WS-018 (Surface) 082413 Filt Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7174895**
 LL Group # **1414252**
 Account # **14739**

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

Collected: 08/24/2013 12:40 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F18-S SDG#: PEL05-10

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	0.0186	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	132381848003	08/28/2013 15:15	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/28/2013 00:25	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/28/2013 00:25	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/28/2013 00:25	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 15:15	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/28/2013 00:25	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/28/2013 00:25	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/28/2013 00:25	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/28/2013 00:25	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 10:14	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

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

Sample Description: WS-011(1.5-2.0)082413 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174896
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/24/2013 11:45 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F111- SDG#: PEL05-11

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	0.0099	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	132381848003	08/28/2013 15:19	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/28/2013 00:29	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/28/2013 00:29	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/28/2013 00:29	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 15:19	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/28/2013 00:29	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/28/2013 00:29	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/28/2013 00:29	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/28/2013 00:29	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 10:16	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

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Sample Description: WS-011(5.0-5.5)082413 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174897
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/24/2013 11:50 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F115- SDG#: PEL05-12

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	0.0082	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	132381848003	08/28/2013 15:22	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/28/2013 00:33	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/28/2013 00:33	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/28/2013 00:33	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 15:22	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/28/2013 00:33	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/28/2013 00:33	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/28/2013 00:33	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/28/2013 00:33	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 10:18	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

Sample Description: WS-003 (Surface) 082413 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174898
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/24/2013 12:55 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F3S-- SDG#: PEL05-13

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	0.0091	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	132381848003	08/28/2013 15:26	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/28/2013 00:37	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/28/2013 00:37	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/28/2013 00:37	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 15:26	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/28/2013 00:37	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/28/2013 00:37	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/28/2013 00:37	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/28/2013 00:37	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 10:20	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

Sample Description: WS-007(0.5-1.0)082413 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174899
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/24/2013 13:15 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F70-- SDG#: PEL05-14

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	0.0174	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	132381848003	08/28/2013 15:38	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/28/2013 00:49	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/28/2013 00:49	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/28/2013 00:49	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 15:38	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/28/2013 00:49	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/28/2013 00:49	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/28/2013 00:49	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/28/2013 00:49	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 10:22	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

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Sample Description: WS-001(0.5-1.0)082413 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174900
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/24/2013 13:30 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F10-- SDG#: PEL05-15

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	0.0110	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	132381848003	08/28/2013 15:41	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/28/2013 00:53	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/28/2013 00:53	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/28/2013 00:53	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 15:41	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/28/2013 00:53	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/28/2013 00:53	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/28/2013 00:53	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/28/2013 00:53	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 10:24	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

Sample Description: **WS-EB-040-082413 Filt Grab Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7174901**
 LL Group # **1414252**
 Account # **14739**

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

Collected: 08/24/2013 14:40 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

FEB40 SDG#: PEL05-16EB

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	0.0019 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	132381848003	08/28/2013 15:45	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/28/2013 00:58	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/28/2013 00:58	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/28/2013 00:58	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 15:45	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/28/2013 00:58	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/28/2013 00:58	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/28/2013 00:58	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/28/2013 00:58	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 10:26	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

Sample Description: WS-014(1.5-2.0)082513 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174902
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/25/2013 08:30 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F-141 SDG#: PEL05-17

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	0.0069	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	132381848003	08/28/2013 15:49	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/28/2013 01:02	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/28/2013 01:02	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/28/2013 01:02	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 15:49	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/28/2013 01:02	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/28/2013 01:02	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/28/2013 01:02	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/28/2013 01:02	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 10:32	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

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Sample Description: WS-014(5.5-6.0)082513 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174903
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/25/2013 08:45 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F-145 SDG#: PEL05-18

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	0.0073	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	132381848003	08/28/2013 15:53	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/28/2013 01:06	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/28/2013 01:06	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/28/2013 01:06	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 15:53	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/28/2013 01:06	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/28/2013 01:06	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/28/2013 01:06	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/28/2013 01:06	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 10:34	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

Sample Description: WS-012(1.5-2.0)082513 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174904
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/25/2013 09:00 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F-121 SDG#: PEL05-19

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	0.0081	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	132381848003	08/28/2013 15:57	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/28/2013 01:10	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/28/2013 01:10	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/28/2013 01:10	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 15:57	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/28/2013 01:10	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/28/2013 01:10	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/28/2013 01:10	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/28/2013 01:10	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132385713007	08/28/2013 10:36	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132385713007	08/27/2013 15:00	Nelli S Markaryan	1

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

Sample Description: WS-012(5.0-5.5)082513 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174905
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/25/2013 09:10 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F-125 SDG#: PEL05-20

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	0.0084	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	132381848003	08/28/2013 16:01	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132381848003	08/28/2013 01:14	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848003	08/28/2013 01:14	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848003	08/28/2013 01:14	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848003	08/28/2013 16:01	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132381848003	08/28/2013 01:14	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848003	08/28/2013 01:14	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132381848003	08/28/2013 01:14	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848003	08/28/2013 01:14	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132395713003	08/29/2013 08:07	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848003	08/27/2013 11:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132395713003	08/28/2013 17:00	Nelli S Markaryan	1

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

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

Sample Description: WS-010(1.5-2.0)082513 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174906
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/25/2013 09:25 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F-101 SDG#: PEL05-21

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	0.0061	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	132381848005	08/28/2013 02:20	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132381848005	08/28/2013 02:20	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848005	08/28/2013 02:20	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848005	08/28/2013 02:20	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848005	08/28/2013 02:20	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132381848005	08/28/2013 02:20	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848005	08/28/2013 11:25	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132381848005	08/28/2013 02:20	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848005	08/28/2013 02:20	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132395713003	08/29/2013 08:09	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848005	08/27/2013 11:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132395713003	08/28/2013 17:00	Nelli S Markaryan	1

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

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Sample Description: WS-010(3.5-4.0)082513 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174907
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/25/2013 09:35 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F-103 SDG#: PEL05-22

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0066	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			mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
SW-846 7470A			mg/l	mg/l	mg/l	

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	132381848005	08/28/2013 02:24	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132381848005	08/28/2013 02:24	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848005	08/28/2013 02:24	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848005	08/28/2013 02:24	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848005	08/28/2013 02:24	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132381848005	08/28/2013 02:24	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848005	08/28/2013 11:29	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132381848005	08/28/2013 02:24	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848005	08/28/2013 02:24	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132395713003	08/29/2013 08:11	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848005	08/27/2013 11:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132395713003	08/28/2013 17:00	Nelli S Markaryan	1

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

Sample Description: WS-006(0.5-1.0)082513 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7174908
LL Group # 1414252
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/25/2013 09:45 by TM

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

Submitted: 08/26/2013 12:30

Reported: 08/29/2013 14:57

F-06- SDG#: PEL05-23*

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	0.0075	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	132381848005	08/28/2013 02:35	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132381848005	08/28/2013 02:35	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132381848005	08/28/2013 02:35	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132381848005	08/28/2013 02:35	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132381848005	08/28/2013 02:35	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132381848005	08/28/2013 02:35	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132381848005	08/28/2013 11:43	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132381848005	08/28/2013 02:35	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132381848005	08/28/2013 02:35	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132395713003	08/29/2013 08:13	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132381848005	08/27/2013 11:34	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132395713003	08/28/2013 17:00	Nelli S Markaryan	1

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 08/29/13 at 02:57 PM

Group Number: 1414252

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: 132381848003	Sample number(s): 7174883-7174905								
Arsenic	N.D.	0.0068	0.0200	mg/l	99		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	101		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	101		90-112		
Chromium	N.D.	0.0016	0.0150	mg/l	102		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	97		88-110		
Nickel	N.D.	0.0015	0.0100	mg/l	103		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	97		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	92		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	102		90-110		
Batch number: 132381848005	Sample number(s): 7174906-7174908								
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	96		90-112		
Chromium	N.D.	0.0016	0.0150	mg/l	102		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	95		88-110		
Nickel	N.D.	0.0015	0.0100	mg/l	100		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	98		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	110		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	104		90-110		
Batch number: 132385713007	Sample number(s): 7174883-7174904								
Mercury	N.D.	0.00006	0.00020	mg/l	102		80-120		
		0							
Batch number: 132395713003	Sample number(s): 7174905-7174908								
Mercury	N.D.	0.00006	0.00020	mg/l	92		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: 132381848003	Sample number(s): 7174883-7174905 UNSPK: 7174889 BKG: 7174889								
Arsenic	100	102	81-123	3	20	N.D.	N.D.	0 (1)	20
Barium	102	103	78-118	1	20	0.0125	0.0125	0 (1)	20
Cadmium	103	103	83-116	0	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.

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 08/29/13 at 02:57 PM

Group Number: 1414252

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</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup</u> <u>RPD</u> <u>Max</u>
Chromium	102	102	81-120	0	20	N.D.	N.D.	0 (1)	20
Lead	94	96	75-125	2	20	N.D.	N.D.	0 (1)	20
Nickel	104	105	86-115	1	20	N.D.	N.D.	0 (1)	20
Selenium	99	99	75-125	0	20	N.D.	N.D.	0 (1)	20
Silver	91	91	75-125	0	20	N.D.	N.D.	0 (1)	20
Vanadium	103	103	90-111	0	20	N.D.	N.D.	0 (1)	20
Batch number: 132381848005 Sample number(s): 7174906-7174908 UNSPK: P174921 BKG: P174921									
Arsenic	102	102	81-123	1	20	N.D.	N.D.	0 (1)	20
Barium	100	100	78-118	0	20	0.0185	0.0182	1 (1)	20
Cadmium	97	98	83-116	0	20	N.D.	N.D.	0 (1)	20
Chromium	102	102	81-120	0	20	N.D.	N.D.	0 (1)	20
Lead	96	97	75-125	1	20	N.D.	N.D.	0 (1)	20
Nickel	101	102	86-115	1	20	N.D.	N.D.	0 (1)	20
Selenium	98	98	75-125	1	20	N.D.	N.D.	0 (1)	20
Silver	109	110	75-125	1	20	N.D.	N.D.	0 (1)	20
Vanadium	104	104	90-111	0	20	N.D.	N.D.	0 (1)	20
Batch number: 132385713007 Sample number(s): 7174883-7174904 UNSPK: 7174889 BKG: 7174889									
Mercury	102	104	80-120	2	20	N.D.	N.D.	0 (1)	20
Batch number: 132395713003 Sample number(s): 7174905-7174908 UNSPK: P174922 BKG: P174922									
Mercury	89	95	80-120	7	20	N.D.	N.D.	0 (1)	20

*- Outside of specification

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

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only

Group # 1414252 Sample # 474856-67

Instructions on reverse side correspond with circled numbers.

7174883-908

Page 1 of 3
CML 8/26/13

1 Client Information				4 Matrix				5 Analyses Requested								6 Remarks																									
Facility #/SID <u>Mayflower Pipeline Incident</u>				Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input checked="" type="checkbox"/>	Oil <input type="checkbox"/> Air <input type="checkbox"/>	Preservation Code								SCR#:		Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other																									
Site Address <u>Mayflower, AR</u>						<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">H</td> <td style="width: 25%;">N</td> <td style="width: 25%;">H</td> <td style="width: 25%;"> </td> <td style="width: 25%;"> </td> <td style="width: 25%;"> </td> <td style="width: 25%;"> </td> <td style="width: 25%;"> </td> <td style="width: 25%;"> </td> <td style="width: 25%;"> </td> <td style="width: 25%;"> </td> <td style="width: 25%;"> </td> <td style="width: 25%;"> </td> <td style="width: 25%;"> </td> </tr> <tr> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> </tr> </table>								H	N			H												✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
H	N	H																																							
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																												
ExxonMobil PM <u>Scott Bushroe</u>		Cost Center/AFE		Total # of Containers <u>9</u>		<u>VOCS 82608</u> <u>PAH 8270 SIM</u> <u>RCRA Metals + N.V.C. Ms</u> <u>Diss. Metals</u> <u>HEM Oil & Grease</u>		Date <u>8/25/13</u>		Time <u>1500</u>		Received by _____		Date _____		Time _____																									
Consultant/Office <u>Arcadis</u>		Consultant Phone # <u>919-302-6799</u>																Relinquished by <u>Dylan Miller</u>		Date _____		Time _____		Received by _____		Date _____		Time _____													
Consultant PM <u>Steve Barrick</u>		Sampler <u>Tyler Milburn / Johnny Beasley</u>		Relinquished by _____		Date _____		Time _____		Received by _____		Date _____		Time _____																											
2 Sample Identification		3 Collected														Grab	Composite	Soil	Water	Oil	Total # of Containers	Date	Time	Received by	Date	Time															
Date	Time	Grab	Composite																																						
WS-014(1.5-2.0)082413	8/24/13	855	✓		✓		✓		9	8/25/13	1500																														
WS-014(5.5-6.0)082413		905	✓		✓		✓		9																																
WS-012(1.5-2.0)082413		920	✓		✓		✓		9																																
WS-012(5.0-5.5)082413		925	✓		✓		✓		9																																
WS-010(1.5-2.0)082413		940	✓		✓		✓		9																																
WS-010(3.5-4.0)082413		950	✓		✓		✓		9																																
WS-006(0.5-1.0)082413		1005	✓		✓		✓		9																																
WS-006(0.5-1.0)082413 MS/MSD		1005	✓		✓		✓		18					MS/MSD																											
WS-005(surface)082413		1055	✓		✓		✓		9																																
WS-002(surface)082413		1120	✓		✓		✓		9																																
WS-018(surface)082413		1240	✓		✓		✓		9																																
WS-011(1.5-2.0)082413		1145	✓		✓		✓		9																																

7 Turnaround Time Requested (TAT) (please circle)

Standard 5 day 4 day

72 hour 48 hour 24 hour

Relinquished by <u>Dylan Miller</u>	Date <u>8/25/13</u>	Time <u>1500</u>	Received by _____	Date _____	Time _____
Relinquished by _____	Date _____	Time _____	Received by _____	Date _____	Time _____
Relinquished by _____	Date _____	Time _____	Received by _____	Date _____	Time _____

8 Data Package (circle if required)

Type I - Full
Type VI (Raw Data)
NJ Reduced
Other _____

EDD (circle if required)

Locus EIM (default)
Other _____

Relinquished by Commercial Carrier

UPS _____ FedEx _____ Other Southwest

Received by
[Signature]

Date
8/25/13

Time
1230

Temperature Upon Receipt 0.4-45°C

Custody Seals Intact? Yes No

Rachel L. Kreamer A# 14739, Gr# 1414252, Sample 7174883-908

From: Chandler, Jennifer [Jennifer.Chandler@arcadis-us.com]
Sent: Monday, August 26, 2013 5:18 PM
To: Kathy Klinefelter
Cc: Rachel L. Kreamer; Mott, Lyndi
Subject: RE: Mayflower Surface water sampling COCs and Southwest Airbill 082513

Kathy,

It appears that the two samples are the Parent and Duplicate, and these bottles were mislabeled. Please proceed to split the total and dissolved containers between the two sample IDs, to complete the bottle sets for metals, and proceed with analysis.

Thank you for your patience,

Jennifer Chandler | Scientist 2 | jennifer.chandler@arcadis-us.com
ARCADIS U.S., Inc. | 630 Plaza Drive, Suite 100 | Highlands Ranch, CO, 80129
T. 303.471.3549 | F. 720.344.3535

www.arcadis-us.com

Please consider the environment before printing this email.

From: Kathy Klinefelter [mailto:KKlinefelter@lancasterlabs.com]
Sent: Monday, August 26, 2013 11:31 AM
To: Chandler, Jennifer; Rachel L. Kreamer
Subject: FW: Mayflower Surface water sampling COCs and Southwest Airbill 082513

Hello Jennifer,

Please see attached COCs. The following discrepancy was noted at unpacking today.

For WS-006(0.5-1.0)082513 collected 8/25/13 at 0945, the lab received 2 HNO3 preserved bottles for total metals, but did not receive a bottle for dissolved metals.

For DUP-WS-76 collected 8/25/13, the lab received 2 unpreserved bottles for lab filtration for dissolved metals, but did not receive a bottle for total metals.

Is DUP-WS-76 the field duplicate of WS-006(0.5-1.0)082513? If so, we will use the extra bottles received to complete the bottle sets for metals for these locations.

Thanks,

Kathy Klinefelter
Principal Project Manager, Environmental Client Services

Eurofins Lancaster Laboratories
Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601
Phone: 717-556-7256
Fax: 717-656-6766

Website: www.LancasterLabsEnv.com

8/27/2013

A# 14739, Gr# 1414252 Samples 7174883-908

From: Milburn, Tyler [<mailto:Tyler.Milburn@arcadis-us.com>]

Sent: Sunday, August 25, 2013 7:34 PM

To: Kathy Klinefelter; Mott, Lyndi; Barrick, Stephen; Brewer, Stacey; Kull, Valerie; SA Env Entry; Capria, Dennis; Rachel L. Kreamer; McKenzie, Mary; Chandler, Jennifer

Cc: Molina, Joe; Lipka, Shelby; Parmelee, Rhiannon; Pritchard, Jamie; Van Aller, Hans; Steve C. Davies

Subject: Mayflower Surface water sampling COCs and Southwest Airbill 082513

Attached are the COCs from yesterday and today's surface water sampling activities. Also attached is the southwest airbill from today's shipment. All samples collected yesterday and today will be on flight 4101/1659 scheduled to arrive in Baltimore at 11:00pm EST tonight.

Thanks,

Tyler Milburn, G.I.T. | Geologist 1 | tyler.milburn@arcadis-us.com
ARCADIS U.S., Inc. | 2464 Fortune Dr., Suite 170 | Lexington, KY 40509
T: 859.253.9036 | M: 859.559.5680 | F: 859.253.9136
www.arcadis-us.com

ARCADIS, Imagine the result
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8/27/2013

Environmental Sample Administration Receipt Documentation Log

Client/Project: ExxonMobil

Shipping Container Sealed: YES NO

Date of Receipt: 8/26/13

Custody Seal Present * : YES NO

Time of Receipt: 1230

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

Source Code: 01

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 (*) Bagged Ice (B) or NA	Comments
1	DT21	4.1	TB	WI	Y	B	
2	↓	0.8	↓	↓	↓	↓	
3	↓	0.5	↓	↓	↓	↓	
4	↓	2.8	↓	↓	↓	↓	
5	↓	1.6	↓	↓	↓	↓	
6	↓	1.6	↓	↓	↓	↓	

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

Paperwork Discrepancy/Unpacking Problems:

Emps 1414243 + 1414252 WS-006(0.5-1.0) 82513 @ 0945 has 2 ^{HNO₃} pres metals bottles
 Emps 1414245 + 1414259 WS-76 82513 has 2 unpres. metals bottles

Unpacker Signature/Emp#: [Signature] 964 Date/Time: 8/26/13 1415

Issued by Dept. 6042 Management
2174.06

Environmental Sample Administration Receipt Documentation Log

Client/Project: Exxon Mobil

Shipping Container Sealed: YES NO

Date of Receipt: 8/26/13

Custody Seal Present * : YES NO

Time of Receipt: 1230

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

Source Code: 01

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
7	DT121	1.6	TB	WI	Y	B	
8	↓	2.4	↓	↓	↓	↓	
9	↓	1.1	↓	↓	↓	↓	
10	↓	0.4	↓	↓	↓	↓	
11	↓	2.1	↓	↓	↓	↓	
12	↓	4.5	↓	↓	↓	↓	

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: [Signature] 964 Date/Time: 8/26/13 1415

Issued by/Dept. 6042 Management
2174.06

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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