

## 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

November 07, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 10/31/2013

Group Number: 1430381

SDG: PEM56

PO Number: B0086003.1301

State of Sample Origin: AR

Client Sample Description

Lancaster Labs (LL) #

WS-018(Surface)103013 Filt Grab Surface Water	7258368
WS-003(Surface)103013 Filt Grab Surface Water	7258369
WS-007(0.5-1.0)103013 Filt Grab Surface Water	7258370
WS-001(0.5-1.0)103013 Filt Grab Surface Water	7258371
WS-002(Surface)103013 Filt Grab Surface Water	7258372
WS-005(Surface)103013 Filt Grab Surface Water	7258373
WS-014(1.5-2.0)103013 Filt Grab Surface Water	7258374
WS-014(5.5-6.0)103013 Filt Grab Surface Water	7258375
WS-012(1.5-2.0)103013 Filt Grab Surface Water	7258376
WS-012(5.0-5.5)103013 Filt Grab Surface Water	7258377
WS-010(1.5-2.0)103013 Filt Grab Surface Water	7258378
WS-010(3.5-4.0)103013 Filt Grab Surface Water	7258379
WS-006(0.5-1.0)103013 Filt Grab Surface Water	7258380
WS-011(1.5-2.0)103013 Filt Grab Surface Water	7258381
WS-011(5.0-5.5)103013 Filt Grab Surface Water	7258382
WS-EB-107-103013 Filt Grab Water	7258383
DUP-WS-110-103013 Filt Grab Surface Water	7258384

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
COPY TO		
ELECTRONIC	ExxonMobil	Attn: Michael L Sixsmith
COPY TO		
ELECTRONIC	ExxonMobil	Attn: Julie Foster
COPY TO		

Respectfully Submitted,



Katherine A. Klinefelter  
Principal Specialist

(717) 556-7256

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Project Name: Mayflower, AR Pipeline Incident  
LLI Group #: 1430381

**General Comments:**

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

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

Project specific QC samples are not included in this data set

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

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

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

**Analysis Specific Comments:**

No additional comments are necessary.

Sample Description: WS-018 (Surface) 103013 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7258368  
LL Group # 1430381  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/30/2013 08:30 by CP

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

Submitted: 10/31/2013 09:15

Reported: 11/07/2013 08:58

3018F SDG#: PEM56-01

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

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	133051848004	11/06/2013 12:12	Eric L Eby	1
07046	Barium	SW-846 6010B	1	133051848004	11/06/2013 12:12	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	133051848004	11/06/2013 12:12	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	133051848004	11/06/2013 12:12	Eric L Eby	1
07055	Lead	SW-846 6010B	1	133051848004	11/06/2013 12:12	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	133051848004	11/06/2013 12:12	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	133051848004	11/06/2013 12:12	Eric L Eby	1
07066	Silver	SW-846 6010B	1	133051848004	11/06/2013 12:12	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	133051848004	11/06/2013 12:12	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	133075713002	11/05/2013 08:10	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133051848004	11/04/2013 09:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133075713002	11/04/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-003 (Surface)103013 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7258369  
LL Group # 1430381  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/30/2013 08:40 by CP

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

Submitted: 10/31/2013 09:15

Reported: 11/07/2013 08:58

3003F SDG#: PEM56-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
		<b>SW-846 6010B</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0184	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		<b>SW-846 7470A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	133051848004	11/06/2013 12:15	Eric L Eby	1
07046	Barium	SW-846 6010B	1	133051848004	11/06/2013 12:15	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	133051848004	11/06/2013 12:15	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	133051848004	11/06/2013 12:15	Eric L Eby	1
07055	Lead	SW-846 6010B	1	133051848004	11/06/2013 12:15	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	133051848004	11/07/2013 07:44	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133051848004	11/06/2013 12:15	Eric L Eby	1
07066	Silver	SW-846 6010B	1	133051848004	11/06/2013 12:15	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	133051848004	11/06/2013 12:15	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	133075713002	11/05/2013 08:13	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133051848004	11/04/2013 09:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133075713002	11/04/2013 16:00	Nelli S Markaryan	1

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

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Sample Description: WS-007(0.5-1.0)103013 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7258370  
LL Group # 1430381  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/30/2013 09:00 by CP

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

Submitted: 10/31/2013 09:15

Reported: 11/07/2013 08:58

3007F SDG#: PEM56-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0151	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	133051848004	11/06/2013 12:27	Eric L Eby	1
07046	Barium	SW-846 6010B	1	133051848004	11/06/2013 12:27	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	133051848004	11/06/2013 12:27	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	133051848004	11/06/2013 12:27	Eric L Eby	1
07055	Lead	SW-846 6010B	1	133051848004	11/06/2013 12:27	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	133051848004	11/06/2013 12:27	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	133051848004	11/06/2013 12:27	Eric L Eby	1
07066	Silver	SW-846 6010B	1	133051848004	11/06/2013 12:27	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	133051848004	11/06/2013 12:27	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	133075713002	11/05/2013 08:15	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133051848004	11/04/2013 09:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133075713002	11/04/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-001(0.5-1.0)103013 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7258371  
LL Group # 1430381  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/30/2013 09:20 by CP

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

Submitted: 10/31/2013 09:15

Reported: 11/07/2013 08:58

3001F SDG#: PEM56-04

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

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	133051848004	11/06/2013 12:31	Eric L Eby	1
07046	Barium	SW-846 6010B	1	133051848004	11/06/2013 12:31	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	133051848004	11/06/2013 12:31	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	133051848004	11/06/2013 12:31	Eric L Eby	1
07055	Lead	SW-846 6010B	1	133051848004	11/06/2013 12:31	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	133051848004	11/06/2013 12:31	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	133051848004	11/06/2013 12:31	Eric L Eby	1
07066	Silver	SW-846 6010B	1	133051848004	11/06/2013 12:31	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	133051848004	11/06/2013 12:31	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	133075713002	11/05/2013 08:17	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133051848004	11/04/2013 09:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133075713002	11/04/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-002 (Surface)103013 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7258372  
LL Group # 1430381  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/30/2013 09:40 by CP

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

Submitted: 10/31/2013 09:15

Reported: 11/07/2013 08:58

3002F SDG#: PEM56-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0167	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	133051848004	11/06/2013 12:35	Eric L Eby	1
07046	Barium	SW-846 6010B	1	133051848004	11/06/2013 12:35	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	133051848004	11/06/2013 12:35	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	133051848004	11/06/2013 12:35	Eric L Eby	1
07055	Lead	SW-846 6010B	1	133051848004	11/06/2013 12:35	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	133051848004	11/06/2013 12:35	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	133051848004	11/06/2013 12:35	Eric L Eby	1
07066	Silver	SW-846 6010B	1	133051848004	11/06/2013 12:35	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	133051848004	11/06/2013 12:35	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	133075713002	11/05/2013 08:19	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133051848004	11/04/2013 09:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133075713002	11/04/2013 16:00	Nelli S Markaryan	1

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



Sample Description: WS-005(Surface)103013 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7258373  
LL Group # 1430381  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/30/2013 10:20 by CP

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

Submitted: 10/31/2013 09:15

Reported: 11/07/2013 08:58

3005F SDG#: PEM56-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
		<b>SW-846 6010B</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0174	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
		<b>SW-846 7470A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	133051848004	11/06/2013 12:39	Eric L Eby	1
07046	Barium	SW-846 6010B	1	133051848004	11/06/2013 12:39	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	133051848004	11/06/2013 12:39	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	133051848004	11/06/2013 12:39	Eric L Eby	1
07055	Lead	SW-846 6010B	1	133051848004	11/06/2013 12:39	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	133051848004	11/06/2013 12:39	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	133051848004	11/06/2013 12:39	Eric L Eby	1
07066	Silver	SW-846 6010B	1	133051848004	11/06/2013 12:39	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	133051848004	11/06/2013 12:39	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	133075713002	11/05/2013 08:21	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133051848004	11/04/2013 09:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133075713002	11/04/2013 16:00	Nelli S Markaryan	1

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

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Sample Description: WS-014(1.5-2.0)103013 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7258374  
LL Group # 1430381  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/30/2013 12:30 by CP

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

Submitted: 10/31/2013 09:15

Reported: 11/07/2013 08:58

3014F SDG#: PEM56-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
		<b>SW-846 6010B</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0158	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		<b>SW-846 7470A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	133051848004	11/06/2013 11:42	Eric L Eby	1
07046	Barium	SW-846 6010B	1	133051848004	11/06/2013 11:42	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	133051848004	11/06/2013 11:42	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	133051848004	11/06/2013 11:42	Eric L Eby	1
07055	Lead	SW-846 6010B	1	133051848004	11/06/2013 11:42	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	133051848004	11/06/2013 11:42	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	133051848004	11/06/2013 11:42	Eric L Eby	1
07066	Silver	SW-846 6010B	1	133051848004	11/06/2013 11:42	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	133051848004	11/06/2013 11:42	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	133075713002	11/05/2013 08:23	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133051848004	11/04/2013 09:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133075713002	11/04/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-014(5.5-6.0)103013 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7258375  
LL Group # 1430381  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/30/2013 12:40 by CP

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

Submitted: 10/31/2013 09:15

Reported: 11/07/2013 08:58

30F14 SDG#: PEM56-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0159	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
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	133051848004	11/06/2013 12:43	Eric L Eby	1
07046	Barium	SW-846 6010B	1	133051848004	11/06/2013 12:43	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	133051848004	11/06/2013 12:43	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	133051848004	11/06/2013 12:43	Eric L Eby	1
07055	Lead	SW-846 6010B	1	133051848004	11/06/2013 12:43	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	133051848004	11/06/2013 12:43	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	133051848004	11/06/2013 12:43	Eric L Eby	1
07066	Silver	SW-846 6010B	1	133051848004	11/06/2013 12:43	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	133051848004	11/06/2013 12:43	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	133075713002	11/05/2013 08:25	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133051848004	11/04/2013 09:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133075713002	11/04/2013 16:00	Nelli S Markaryan	1

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

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Sample Description: WS-012(1.5-2.0)103013 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7258376  
LL Group # 1430381  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/30/2013 12:50 by CP

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

Submitted: 10/31/2013 09:15

Reported: 11/07/2013 08:58

3012F SDG#: PEM56-09

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

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	133051848004	11/06/2013 12:47	Eric L Eby	1
07046	Barium	SW-846 6010B	1	133051848004	11/06/2013 12:47	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	133051848004	11/06/2013 12:47	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	133051848004	11/06/2013 12:47	Eric L Eby	1
07055	Lead	SW-846 6010B	1	133051848004	11/06/2013 12:47	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	133051848004	11/06/2013 12:47	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	133051848004	11/06/2013 12:47	Eric L Eby	1
07066	Silver	SW-846 6010B	1	133051848004	11/06/2013 12:47	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	133051848004	11/06/2013 12:47	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	133075713002	11/05/2013 08:27	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133051848004	11/04/2013 09:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133075713002	11/04/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-012(5.0-5.5)103013 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7258377  
LL Group # 1430381  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/30/2013 13:00 by CP

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

Submitted: 10/31/2013 09:15

Reported: 11/07/2013 08:58

30F12 SDG#: PEM56-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0155	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	133051848004	11/06/2013 12:51	Eric L Eby	1
07046	Barium	SW-846 6010B	1	133051848004	11/06/2013 12:51	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	133051848004	11/06/2013 12:51	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	133051848004	11/06/2013 12:51	Eric L Eby	1
07055	Lead	SW-846 6010B	1	133051848004	11/06/2013 12:51	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	133051848004	11/06/2013 12:51	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	133051848004	11/06/2013 12:51	Eric L Eby	1
07066	Silver	SW-846 6010B	1	133051848004	11/06/2013 12:51	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	133051848004	11/06/2013 12:51	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	133075713002	11/05/2013 08:29	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133051848004	11/04/2013 09:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133075713002	11/04/2013 16:00	Nelli S Markaryan	1

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

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Sample Description: WS-010(1.5-2.0)103013 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7258378  
LL Group # 1430381  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 10/31/2013 09:15

Reported: 11/07/2013 08:58

3010F SDG#: PEM56-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0174	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
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	133051848004	11/06/2013 12:54	Eric L Eby	1
07046	Barium	SW-846 6010B	1	133051848004	11/06/2013 12:54	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	133051848004	11/06/2013 12:54	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	133051848004	11/06/2013 12:54	Eric L Eby	1
07055	Lead	SW-846 6010B	1	133051848004	11/06/2013 12:54	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	133051848004	11/06/2013 12:54	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	133051848004	11/06/2013 12:54	Eric L Eby	1
07066	Silver	SW-846 6010B	1	133051848004	11/06/2013 12:54	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	133051848004	11/06/2013 12:54	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	133075713002	11/05/2013 08:35	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133051848004	11/04/2013 09:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133075713002	11/04/2013 16:00	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)103013 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7258379  
LL Group # 1430381  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/30/2013 13:20 by CP

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

Submitted: 10/31/2013 09:15

Reported: 11/07/2013 08:58

30F10 SDG#: PEM56-12

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

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	133051848004	11/06/2013 12:58	Eric L Eby	1
07046	Barium	SW-846 6010B	1	133051848004	11/06/2013 12:58	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	133051848004	11/06/2013 12:58	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	133051848004	11/06/2013 12:58	Eric L Eby	1
07055	Lead	SW-846 6010B	1	133051848004	11/06/2013 12:58	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	133051848004	11/06/2013 12:58	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	133051848004	11/06/2013 12:58	Eric L Eby	1
07066	Silver	SW-846 6010B	1	133051848004	11/06/2013 12:58	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	133051848004	11/06/2013 12:58	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	133075713002	11/05/2013 08:37	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133051848004	11/04/2013 09:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133075713002	11/04/2013 16:00	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)103013 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7258380  
LL Group # 1430381  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 10/31/2013 09:15

Reported: 11/07/2013 08:58

3006F SDG#: PEM56-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
		<b>SW-846 6010B</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0183	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		<b>SW-846 7470A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	133051848004	11/06/2013 13:02	Eric L Eby	1
07046	Barium	SW-846 6010B	1	133051848004	11/06/2013 13:02	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	133051848004	11/06/2013 13:02	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	133051848004	11/06/2013 13:02	Eric L Eby	1
07055	Lead	SW-846 6010B	1	133051848004	11/06/2013 13:02	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	133051848004	11/06/2013 13:02	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	133051848004	11/06/2013 13:02	Eric L Eby	1
07066	Silver	SW-846 6010B	1	133051848004	11/06/2013 13:02	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	133051848004	11/06/2013 13:02	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	133075713002	11/05/2013 08:45	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133051848004	11/04/2013 09:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133075713002	11/04/2013 16:00	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)103013 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7258381  
LL Group # 1430381  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/30/2013 13:40 by CP

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

Submitted: 10/31/2013 09:15

Reported: 11/07/2013 08:58

3011F SDG#: PEM56-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
		<b>SW-846 6010B</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0178	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		<b>SW-846 7470A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	133051848004	11/06/2013 13:14	Eric L Eby	1
07046	Barium	SW-846 6010B	1	133051848004	11/06/2013 13:14	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	133051848004	11/06/2013 13:14	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	133051848004	11/06/2013 13:14	Eric L Eby	1
07055	Lead	SW-846 6010B	1	133051848004	11/06/2013 13:14	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	133051848004	11/06/2013 13:14	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	133051848004	11/06/2013 13:14	Eric L Eby	1
07066	Silver	SW-846 6010B	1	133051848004	11/06/2013 13:14	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	133051848004	11/06/2013 13:14	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	133075713002	11/05/2013 08:47	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133051848004	11/04/2013 09:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133075713002	11/04/2013 16:00	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(5.0-5.5)103013 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7258382  
LL Group # 1430381  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/30/2013 13:50 by CP

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

Submitted: 10/31/2013 09:15

Reported: 11/07/2013 08:58

30F11 SDG#: PEM56-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
		<b>SW-846 6010B</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0173	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		<b>SW-846 7470A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	133051848004	11/06/2013 13:18	Eric L Eby	1
07046	Barium	SW-846 6010B	1	133051848004	11/06/2013 13:18	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	133051848004	11/06/2013 13:18	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	133051848004	11/06/2013 13:18	Eric L Eby	1
07055	Lead	SW-846 6010B	1	133051848004	11/06/2013 13:18	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	133051848004	11/06/2013 13:18	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	133051848004	11/06/2013 13:18	Eric L Eby	1
07066	Silver	SW-846 6010B	1	133051848004	11/06/2013 13:18	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	133051848004	11/06/2013 13:18	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	133075713002	11/05/2013 08:49	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133051848004	11/04/2013 09:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133075713002	11/04/2013 16:00	Nelli S Markaryan	1

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

Sample Description: **WS-EB-107-103013 Filt Grab Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7258383**  
 LL Group # **1430381**  
 Account # **14739**

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

Collected: 10/30/2013 14:50 by CP

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

Submitted: 10/31/2013 09:15

Reported: 11/07/2013 08:58

107-F SDG#: PEM56-16EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.00040 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
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	133051848004	11/06/2013 13:22	Eric L Eby	1
07046	Barium	SW-846 6010B	1	133051848004	11/06/2013 13:22	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	133051848004	11/06/2013 13:22	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	133051848004	11/06/2013 13:22	Eric L Eby	1
07055	Lead	SW-846 6010B	1	133051848004	11/06/2013 13:22	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	133051848004	11/06/2013 13:22	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	133051848004	11/06/2013 13:22	Eric L Eby	1
07066	Silver	SW-846 6010B	1	133051848004	11/06/2013 13:22	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	133051848004	11/06/2013 13:22	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	133075713002	11/05/2013 08:51	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133051848004	11/04/2013 09:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133075713002	11/04/2013 16:00	Nelli S Markaryan	1

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

Sample Description: DUP-WS-110-103013 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7258384  
LL Group # 1430381  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/30/2013 by CP

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

Submitted: 10/31/2013 09:15

Reported: 11/07/2013 08:58

110-F SDG#: PEM56-17FD\*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals Dissolved</b>						
		<b>SW-846 6010B</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0184	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		<b>SW-846 7470A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	133051848004	11/06/2013 13:26	Eric L Eby	1
07046	Barium	SW-846 6010B	1	133051848004	11/06/2013 13:26	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	133051848004	11/06/2013 13:26	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	133051848004	11/06/2013 13:26	Eric L Eby	1
07055	Lead	SW-846 6010B	1	133051848004	11/06/2013 13:26	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	133051848004	11/06/2013 13:26	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	133051848004	11/06/2013 13:26	Eric L Eby	1
07066	Silver	SW-846 6010B	1	133051848004	11/06/2013 13:26	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	133051848004	11/06/2013 13:26	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	133075713002	11/05/2013 08:53	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133051848004	11/04/2013 09:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133075713002	11/04/2013 16:00	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: 11/07/13 at 08:58 AM

Group Number: 1430381

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: 133051848004	Sample number(s): 7258368-7258384								
Arsenic	N.D.	0.0068	0.0200	mg/l	105		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	102		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	104		90-112		
Chromium	N.D.	0.0016	0.0150	mg/l	101		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	109		88-110		
Nickel	N.D.	0.0015	0.0100	mg/l	105		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	101		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	95		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	98		90-110		
Batch number: 133075713002	Sample number(s): 7258368-7258384								
Mercury	N.D.	0.00006	0.00020	mg/l	96		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: 133051848004	Sample number(s): 7258368-7258384 UNSPK: 7258374 BKG: 7258374								
Arsenic	103	105	81-123	2	20	N.D.	N.D.	0 (1)	20
Barium	104	101	78-118	3	20	0.0158	0.0149	6 (1)	20
Cadmium	102	102	83-116	0	20	N.D.	N.D.	0 (1)	20
Chromium	104	99	76-120	5	20	N.D.	N.D.	0 (1)	20
Lead	108	108	75-125	0	20	N.D.	N.D.	0 (1)	20
Nickel	104	104	86-115	0	20	N.D.	N.D.	0 (1)	20
Selenium	99	101	75-125	2	20	N.D.	N.D.	0 (1)	20
Silver	99	94	75-125	6	20	N.D.	N.D.	0 (1)	20
Vanadium	101	97	90-117	4	20	N.D.	N.D.	0 (1)	20
Batch number: 133075713002	Sample number(s): 7258368-7258384 UNSPK: 7258379 BKG: 7258379								
Mercury	91	93	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.

# ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories  
Environmental

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only

Group # 1430381

Sample # 7258368-84

Instructions on reverse side correspond with circled numbers.

1 of 2

1 Client Information				4 Matrix			5 Analyses Requested							SCR#: _____				
Facility #/SID <u>Mayflower Pipeline Incident</u>				Soil <input type="checkbox"/>	Sediment <input type="checkbox"/>	Ground <input type="checkbox"/>	Surface <input checked="" type="checkbox"/>	Preservation Code							<b>Preservation Codes</b> H = HCl      T = Thiosulfate N = HNO <sub>3</sub> B = NaOH S = H <sub>2</sub> SO <sub>4</sub> O = Other			
Site Address <u>Mayflower, AR</u>								Potable <input type="checkbox"/>	NPDES <input type="checkbox"/>	Air <input type="checkbox"/>	Total # of Containers	H	N	S			T	B
ExxonMobil PM <u>Scott Bishroe</u>		Cost Center/AFE		VCS 8260B PAH 8270 SIM RCA Metals + Trace Metals Diss Metals HEM Oil & Grease								6 <b>Remarks</b> Lab to filter and preserve diss metals upon receipt						
Consultant/Office <u>ARCADIS</u>											Consultant PM <u>Steve Barrick</u>			Consultant Phone # <u>919-302-6799</u>				
Sampler <u>Clement Papafio / Ryan Lewis</u>				3		Composite												
2 Sample Identification		Collected		Grab <input type="checkbox"/>	Composite <input type="checkbox"/>	Soil <input type="checkbox"/>	Water <input type="checkbox"/>	Oil <input type="checkbox"/>	Total # of Containers									
Date	Time	Grab	Composite							Soil	Water	Oil	Total # of Containers	H	N	S	T	B
WS-08 (Surface)	103013	10-30-13	0830	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
WS-003 (Surface)	103013	10-30-13	0840	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
WS-007 (0.5-1.0)	103013	10-30-13	0900	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
WS-001 (0.5-1.0)	103013	10-30-13	0920	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
WS-002 (Surface)	103013	10-30-13	0940	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
WS-005 (Surface)	103013	10-30-13	1020	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
WS-014 (1.5-2.0)	103013	10-30-13	1230	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
WS-014 (5.5-6.0)	103013	10-30-13	1240	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
WS-012 (1.5-2.0)	103013	10-30-13	1250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
WS-012 (5.0-5.5)	103013	10-30-13	1300	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
WS-010 (1.5-2.0)	103013	10-30-13	1310	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
WS-010 (3.5-4.0)	103013	10-30-13	1320	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			

  

7 Turnaround Time Requested (TAT) (please circle)				Relinquished by <u>[Signature]</u>		Date <u>10-30-13</u> Time <u>1700</u>		Received by _____		Date _____ Time _____			
Standard		<u>5 day</u>		4 day		Relinquished by _____		Date _____		Time _____			
72 hour		48 hour		24 hour		Relinquished by _____		Date _____		Time _____			
8 Data Package (circle if required)				Relinquished by Commercial Carrier									
Type I - Full		Type VI (Raw Data)		NJ Reduced		Other _____		UPS <input checked="" type="checkbox"/>		FedEx _____		Other _____	
EDD (circle if required)				Locus EIM (default)		Other _____		Temperature Upon Receipt <u>0.4-2.1 °C</u>		Custody Seals Intact? <u>(Yes)</u> No			
Received by <u>[Signature]</u>				Date <u>10/31/13</u>		Time <u>0915</u>							

# ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories  
Environmental

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only

Group # 1430381 Sample # 7258368-84

Instructions on reverse side correspond with circled numbers.

2 of 2

1 Client Information				4 Matrix				5 Analyses Requested								6 Remarks	
Facility #/SID: <u>Mayflower Pipe line Incident</u> Site Address: <u>Mayflower, AR</u> ExxonMobil PM: <u>Scott Bushroe</u> Cost Center/AFE: _____ Consultant/Office: <u>ARCADIS</u> Consultant PM: <u>Steve Barrick</u> Consultant Phone #: <u>919-302-6744</u> Sampler: <u>Clement Pappas / Pyram Lewis</u>				Sediment <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input checked="" type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Soil <input type="checkbox"/> Water <input checked="" type="checkbox"/> Oil <input type="checkbox"/>				Preservation Code H <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> H <input checked="" type="checkbox"/> Total # of Containers: <u>9</u> VOCs <u>8260B</u> PAH <u>82705M</u> RCRA Metals <u>Trace</u> Diss Metals <u>Trace</u> HEM Oil & Grease <u>Trace</u>								SCR#: _____ Preservation Codes: H = HCl      T = Thiosulfate N = HNO <sub>3</sub> B = NaOH S = H <sub>2</sub> SO <sub>4</sub> O = Other	
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Oil	Total # of Containers	VOCs	PAH	RCRA Metals	Diss Metals	HEM Oil & Grease	6 Remarks <u>Lab to filter and preserve diss metals upon receipt</u>		
Date	Time	Date	Time														
WS-006 (0.5-1.0) 103013	10-30-13	1330		X			X		9	X	X	X	X	X			
WS-011 (1.5-2.0) 103013	10-30-13	1340		X			X		9	X	X	X	X	X			
WS-011 (5.0-5.5) 103013	10-30-13	1350		X			X		9	X	X	X	X	X			
WS-EB-107-103013	10-30-13	1450		X			X		7	X	X	X	X	X			
WS-TB-190-103013	10-30-13	—		X			X		2	X	X	X	X	X			
DUP-WS-110-103013	10-30-13	—		X			X		9	X	X	X	X	X			

  

7 Turnaround Time Requested (TAT) (please circle)				Relinquished by <u>[Signature]</u>		Date <u>10-30-13</u>	Time <u>1700</u>	Received by _____	Date _____	Time _____	9
Standard <u>5 day</u> 4 day 72 hour      48 hour      24 hour				Relinquished by _____		Date _____	Time _____	Received by _____	Date _____	Time _____	
				Relinquished by _____		Date _____	Time _____	Received by _____	Date _____	Time _____	
8 Data Package (circle if required)				Relinquished by Commercial Carrier		Temperature Upon Receipt <u>0.4 -21 °C</u>		Received by <u>[Signature]</u>		Date <u>10/31/13</u>	Time <u>0915</u>
Type I - Full Type VI (Raw Data) NJ Reduced Other _____				EDD (circle if required) Locus EIM (default) Other _____		UPS <input checked="" type="checkbox"/> FedEx _____ Other _____		Custody Seals Intact? <u>Yes</u> No			

Environmental Sample Administration **1430381**  
Receipt Documentation Log

Client/Project: May flowers  
Date of Receipt: 10/31/13  
Time of Receipt: 0915  
Source Code: 60-1

Shipping Container Sealed:  YES  NO  
Custody Seal Present \* :  YES  NO  
\* Custody seal was intact unless otherwise noted in the discrepancy section  
Package:  Chilled  Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT121	0.9	TB	WI	Y	B	
2	↓	1.2	↓	↓	↓	↓	
3		2.1					
4		0.6					
5		0.6					
6		0.4					
6							

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

Paperwork Discrepancy/Unpacking Problems:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Unpacker Signature/Emp#: CC Asher 3647 Date/Time: 10/31/13 1020



# Explanation of Symbols and Abbreviations

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

<b>RL</b>	Reporting Limit	<b>BMQL</b>	Below Minimum Quantitation Level
<b>N.D.</b>	none detected	<b>MPN</b>	Most Probable Number
<b>TNTC</b>	Too Numerous To Count	<b>CP Units</b>	cobalt-chloroplatinate units
<b>IU</b>	International Units	<b>NTU</b>	nephelometric turbidity units
<b>umhos/cm</b>	micromhos/cm	<b>ng</b>	nanogram(s)
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>meq</b>	milliequivalents	<b>lb.</b>	pound(s)
<b>g</b>	gram(s)	<b>kg</b>	kilogram(s)
<b>µg</b>	microgram(s)	<b>mg</b>	milligram(s)
<b>mL</b>	milliliter(s)	<b>L</b>	liter(s)
<b>m3</b>	cubic meter(s)	<b>µL</b>	microliter(s)
		<b>pg/L</b>	picogram/liter

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

> greater than

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

**ppb** parts per billion

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

*Data Qualifiers:*

**C** – result confirmed by reanalysis.

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

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

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

**Inorganic Qualifiers**

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

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

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

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

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

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