Analysis Report

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

ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 ExxonMobil Mobil Pipeline Company PO Box 4416 Houston TX 77210-4416

July 29, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 07/24/2013 Group Number: 1406226 SDG: PEJ35 PO Number: 4510076246 Release Number: MAYFLOWER 1406 State of Sample Origin: AR

Client Sample Description	Lancaster Labs (LL) #
WS-014(1.5-2.0)072313 Filt Grab Surface Water	7137400
WS-014(5.5-6.0)072313 Filt Grab Surface Water	7137401
WS-012(1.5-2.0)072313 Filt Grab Surface Water	7137402
WS-012(5.0-5.5)072313 Filt Grab Surface Water	7137403
WS-010(1.5-2.0)072313 Filt Grab Surface Water	7137404
WS-010(3.5-4.0)072313 Filt Grab Surface Water	7137405
WS-011(1.5-2.0)072313 Filt Grab Surface Water	7137406
WS-011(5.0-5.5)072313 Filt Grab Surface Water	7137407
WS-005(Surface)072313 Filt Grab Surface Water	7137408
WS-003(Surface)072313 Filt Grab Surface Water	7137409
WS-018(Surface)072313 Filt Grab Surface Water	7137410
WS-002(Surface)072313 Filt Grab Surface Water	7137411
WS-007(0.5-1.0)072313 Filt Grab Surface Water	7137412
WS-006(0.5-1.0)072313 Filt Grab Surface Water	7137413
WS-001(0.5-1.0)072313 Filt Grab Surface Water	7137414
DUP-WS-60-072313 Filt Grab Surface Water	7137415
WS-EB-9-072313 Filt Grab Water	7137416

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC	ARCADIS	Attn: Stephen Barrick
COPY TO		
ELECTRONIC	ARCADIS	Attn: Lyndi Mott
COPY TO		•
ELECTRONIC	ExxonMobil	Attn: Michael J. Firth
COPY TO		

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

Respectfully Submitted,

Katherine A. Klinefelter Principal Specialist

Katherine a. Klinefelter

(717) 556-7256



Case Narrative

Project Name: Mayflower, AR Pipeline Incident LLI Group #: 1406226

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.



Analysis Report

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Sample Description: WS-014(1.5-2.0)072313 Filt Grab Surface Water

LL Sample # WW 7137400 Mayflower, AR LL Group # 1406226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/23/2013 08:45 by LD ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

-F141 SDG#: PEJ35-01

Submitted: 07/24/2013 09:20

Reported: 07/29/2013 15:14

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	s 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	0.0156	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.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132051848004	07/25/2013	20:04	John P Hook	1
07046	Barium	SW-846 6010B	1	132051848004	07/25/2013	20:04	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132051848004	07/25/2013	20:04	John P Hook	1
07051	Chromium	SW-846 6010B	1	132051848004	07/25/2013	20:04	John P Hook	1
07055	Lead	SW-846 6010B	1	132051848004	07/25/2013	20:04	John P Hook	1
07061	Nickel	SW-846 6010B	1	132051848004	07/25/2013	20:04	John P Hook	1
07036	Selenium	SW-846 6010B	1	132051848004	07/25/2013	20:04	John P Hook	1
07066	Silver	SW-846 6010B	1	132051848004	07/25/2013	20:04	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132051848004	07/25/2013	20:04	John P Hook	1
00259	Mercury	SW-846 7470A	1	132055713005	07/26/2013	16:51	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132051848004	07/25/2013	06:38	James L Mertz	1
05713	WW SW846 Ha Diaest	SW-846 7470A	1	132055713005	07/25/2013	13.15	Nelli S Markarvan	1



Analysis Report

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Sample Description: WS-014(5.5-6.0)072313 Filt Grab Surface Water

LL Sample # WW 7137401 Mayflower, AR LL Group # 1406226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/23/2013 08:50 by LD ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

-F142 SDG#: PEJ35-02

Submitted: 07/24/2013 09:20

Reported: 07/29/2013 15:14

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.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tim	ne	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132051848004	07/25/2013	20:08	John P Hook	1
07046	Barium	SW-846 6010B	1	132051848004	07/25/2013	20:08	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132051848004	07/25/2013	20:08	John P Hook	1
07051	Chromium	SW-846 6010B	1	132051848004	07/25/2013	20:08	John P Hook	1
07055	Lead	SW-846 6010B	1	132051848004	07/25/2013	20:08	John P Hook	1
07061	Nickel	SW-846 6010B	1	132051848004	07/25/2013	20:08	John P Hook	1
07036	Selenium	SW-846 6010B	1	132051848004	07/25/2013	20:08	John P Hook	1
07066	Silver	SW-846 6010B	1	132051848004	07/25/2013	20:08	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132051848004	07/25/2013	20:08	John P Hook	1
00259	Mercury	SW-846 7470A	1	132055713005	07/26/2013	16:59	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132051848004	07/25/2013	06:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132055713005	07/25/2013	13:15	Nelli S Markaryan	1



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Sample Description: WS-012(1.5-2.0)072313 Filt Grab Surface Water

LL Sample # WW 7137402 Mayflower, AR LL Group # 1406226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/23/2013 09:15 by LD ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

-F121 SDG#: PEJ35-03

Submitted: 07/24/2013 09:20

Reported: 07/29/2013 15:14

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	0.0185	0.00033	0.0050	1
07049	Cadmium		7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium		7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead		7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel		7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium		7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver		7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium		7440-62-2	N.D.	0.0020	0.0050	1
		SW-846	7470A	mg/l	mg/l	mg/l	
00259	Mercury		7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132051848004	07/25/2013	20:19	John P Hook	1
07046	Barium	SW-846 6010B	1	132051848004	07/25/2013	20:19	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132051848004	07/25/2013	20:19	John P Hook	1
07051	Chromium	SW-846 6010B	1	132051848004	07/25/2013	20:19	John P Hook	1
07055	Lead	SW-846 6010B	1	132051848004	07/25/2013	20:19	John P Hook	1
07061	Nickel	SW-846 6010B	1	132051848004	07/25/2013	20:19	John P Hook	1
07036	Selenium	SW-846 6010B	1	132051848004	07/25/2013	20:19	John P Hook	1
07066	Silver	SW-846 6010B	1	132051848004	07/25/2013	20:19	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132051848004	07/25/2013	20:19	John P Hook	1
00259	Mercury	SW-846 7470A	1	132055713005	07/26/2013	17:01	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132051848004	07/25/2013	06:38	James L Mertz	1
05713	WW SW846 Ha Diaest	SW-846 7470A	1	132055713005	07/25/2013	13.15	Nelli S Markarvan	1



Analysis Report

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Sample Description: WS-012(5.0-5.5)072313 Filt Grab Surface Water

LL Sample # WW 7137403 Mayflower, AR LL Group # 1406226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/23/2013 09:20 by LD ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

-F122 SDG#: PEJ35-04

Submitted: 07/24/2013 09:20

Reported: 07/29/2013 15:14

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	0.0190	0.00033	0.0050	1
07049	Cadmium		7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium		7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead		7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel		7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium		7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver		7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium		7440-62-2	N.D.	0.0020	0.0050	1
		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.

CAT	Analysis Name	Method	Trial#	Batch#	Analysis		Analyst	Dilution
No.					Date and Ti	me		Factor
07035	Arsenic	SW-846 6010B	1	132051848004	07/25/2013	20:23	John P Hook	1
07046	Barium	SW-846 6010B	1	132051848004	07/25/2013	20:23	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132051848004	07/25/2013	20:23	John P Hook	1
07051	Chromium	SW-846 6010B	1	132051848004	07/25/2013	20:23	John P Hook	1
07055	Lead	SW-846 6010B	1	132051848004	07/25/2013	20:23	John P Hook	1
07061	Nickel	SW-846 6010B	1	132051848004	07/25/2013	20:23	John P Hook	1
07036	Selenium	SW-846 6010B	1	132051848004	07/25/2013	20:23	John P Hook	1
07066	Silver	SW-846 6010B	1	132051848004	07/25/2013	20:23	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132051848004	07/25/2013	20:23	John P Hook	1
00259	Mercury	SW-846 7470A	1	132055713005	07/26/2013	17:03	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132051848004	07/25/2013	06:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132055713005	07/25/2013	13:15	Nelli S Markaryan	1



Analysis Report

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Sample Description: WS-010(1.5-2.0)072313 Filt Grab Surface Water

LL Sample # WW 7137404 Mayflower, AR LL Group # 1406226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/23/2013 09:55 by LD ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

-F101 SDG#: PEJ35-05

Submitted: 07/24/2013 09:20

Reported: 07/29/2013 15:14

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	0.0227	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.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132051848004	07/25/2013	20:27	John P Hook	1
07046	Barium	SW-846 6010B	1	132051848004	07/25/2013	20:27	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132051848004	07/25/2013	20:27	John P Hook	1
07051	Chromium	SW-846 6010B	1	132051848004	07/25/2013	20:27	John P Hook	1
07055	Lead	SW-846 6010B	1	132051848004	07/25/2013	20:27	John P Hook	1
07061	Nickel	SW-846 6010B	1	132051848004	07/25/2013	20:27	John P Hook	1
07036	Selenium	SW-846 6010B	1	132051848004	07/25/2013	20:27	John P Hook	1
07066	Silver	SW-846 6010B	1	132051848004	07/25/2013	20:27	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132051848004	07/25/2013	20:27	John P Hook	1
00259	Mercury	SW-846 7470A	1	132055713005	07/26/2013	17:09	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132051848004	07/25/2013	06:38	James L Mertz	1
05713	WW SW846 Ha Diaest	SW-846 7470A	1	132055713005	07/25/2013	13.15	Nelli S Markarvan	1



Analysis Report

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Sample Description: WS-010(3.5-4.0)072313 Filt Grab Surface Water

LL Sample # WW 7137405 Mayflower, AR LL Group # 1406226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/23/2013 10:00 by LD ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

-F102 SDG#: PEJ35-06

Submitted: 07/24/2013 09:20

Reported: 07/29/2013 15:14

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	s 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	0.0228	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.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tir	me	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132051848004	07/25/2013	20:30	John P Hook	1
07046	Barium	SW-846 6010B	1	132051848004	07/25/2013	20:30	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132051848004	07/25/2013	20:30	John P Hook	1
07051	Chromium	SW-846 6010B	1	132051848004	07/25/2013	20:30	John P Hook	1
07055	Lead	SW-846 6010B	1	132051848004	07/25/2013	20:30	John P Hook	1
07061	Nickel	SW-846 6010B	1	132051848004	07/25/2013	20:30	John P Hook	1
07036	Selenium	SW-846 6010B	1	132051848004	07/25/2013	20:30	John P Hook	1
07066	Silver	SW-846 6010B	1	132051848004	07/25/2013	20:30	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132051848004	07/25/2013	20:30	John P Hook	1
00259	Mercury	SW-846 7470A	1	132055713005	07/26/2013	17:11	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132051848004	07/25/2013	06:38	James L Mertz	1
05713	WW SW846 Ha Diaest	SW-846 7470A	1	132055713005	07/25/2013	13.15	Nelli S Markarvan	1



Analysis Report

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Sample Description: WS-011(1.5-2.0)072313 Filt Grab Surface Water

LL Sample # WW 7137406 Mayflower, AR LL Group # 1406226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/23/2013 11:00 by LD ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

-F111 SDG#: PEJ35-07

Submitted: 07/24/2013 09:20

Reported: 07/29/2013 15:14

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	0.0171	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.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132051848004	07/25/2013	19:41	John P Hook	1
07046	Barium	SW-846 6010B	1	132051848004	07/25/2013	19:41	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132051848004	07/25/2013	19:41	John P Hook	1
07051	Chromium	SW-846 6010B	1	132051848004	07/25/2013	19:41	John P Hook	1
07055	Lead	SW-846 6010B	1	132051848004	07/25/2013	19:41	John P Hook	1
07061	Nickel	SW-846 6010B	1	132051848004	07/25/2013	19:41	John P Hook	1
07036	Selenium	SW-846 6010B	1	132051848004	07/25/2013	19:41	John P Hook	1
07066	Silver	SW-846 6010B	1	132051848004	07/25/2013	19:41	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132051848004	07/25/2013	19:41	John P Hook	1
00259	Mercury	SW-846 7470A	1	132055713005	07/26/2013	17:13	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132051848004	07/25/2013	06:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132055713005	07/25/2013	13:15	Nelli S Markaryan	1



Analysis Report

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)072313 Filt Grab Surface Water

LL Sample # WW 7137407 Mayflower, AR LL Group # 1406226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/23/2013 11:10 by LD ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

-F112 SDG#: PEJ35-08

Submitted: 07/24/2013 09:20

Reported: 07/29/2013 15:14

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	0.0189	0.00033	0.0050	1
07049	Cadmium		7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium		7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead		7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel		7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium		7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver		7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium		7440-62-2	N.D.	0.0020	0.0050	1
		SW-846	7470A	mg/l	mg/l	mg/l	
00259	Mercury		7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	.me	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132051848004	07/25/2013	20:34	John P Hook	1
07046	Barium	SW-846 6010B	1	132051848004	07/25/2013	20:34	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132051848004	07/25/2013	20:34	John P Hook	1
07051	Chromium	SW-846 6010B	1	132051848004	07/25/2013	20:34	John P Hook	1
07055	Lead	SW-846 6010B	1	132051848004	07/25/2013	20:34	John P Hook	1
07061	Nickel	SW-846 6010B	1	132051848004	07/25/2013	20:34	John P Hook	1
07036	Selenium	SW-846 6010B	1	132051848004	07/25/2013	20:34	John P Hook	1
07066	Silver	SW-846 6010B	1	132051848004	07/25/2013	20:34	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132051848004	07/25/2013	20:34	John P Hook	1
00259	Mercury	SW-846 7470A	1	132055713005	07/26/2013	17:15	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132051848004	07/25/2013	06:38	James L Mertz	1
05713	WW SW846 Ha Digest	SW-846 7470A	1	132055713005	07/25/2013	13.15	Nelli S Markarvan	1



Analysis Report

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

Sample Description: WS-005(Surface)072313 Filt Grab Surface Water

LL Sample # WW 7137408 Mayflower, AR LL Group # 1406226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/23/2013 10:30 by LD ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

-F005 SDG#: PEJ35-09

Submitted: 07/24/2013 09:20

Reported: 07/29/2013 15:14

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	0.0113	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.

CAT	Analysis Name	Method	Trial#	Batch#	Analysis		Analyst	Dilution
No.					Date and Ti	me		Factor
07035	Arsenic	SW-846 6010B	1	132051848004	07/25/2013	20:38	John P Hook	1
07046	Barium	SW-846 6010B	1	132051848004	07/25/2013	20:38	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132051848004	07/25/2013	20:38	John P Hook	1
07051	Chromium	SW-846 6010B	1	132051848004	07/25/2013	20:38	John P Hook	1
07055	Lead	SW-846 6010B	1	132051848004	07/25/2013	20:38	John P Hook	1
07061	Nickel	SW-846 6010B	1	132051848004	07/25/2013	20:38	John P Hook	1
07036	Selenium	SW-846 6010B	1	132051848004	07/25/2013	20:38	John P Hook	1
07066	Silver	SW-846 6010B	1	132051848004	07/25/2013	20:38	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132051848004	07/25/2013	20:38	John P Hook	1
00259	Mercury	SW-846 7470A	1	132055713005	07/26/2013	17:17	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132051848004	07/25/2013	06:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132055713005	07/25/2013	13:15	Nelli S Markaryan	1



Analysis Report

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

Sample Description: WS-003(Surface)072313 Filt Grab Surface Water

LL Sample # WW 7137409 Mayflower, AR LL Group # 1406226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/23/2013 12:55 by LD ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

-F003 SDG#: PEJ35-10

Submitted: 07/24/2013 09:20

Reported: 07/29/2013 15:14

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	s 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	0.0184	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
		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.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132051848004	07/25/2013	20:42	John P Hook	1
07046	Barium	SW-846 6010B	1	132051848004	07/25/2013	20:42	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132051848004	07/25/2013	20:42	John P Hook	1
07051	Chromium	SW-846 6010B	1	132051848004	07/25/2013	20:42	John P Hook	1
07055	Lead	SW-846 6010B	1	132051848004	07/25/2013	20:42	John P Hook	1
07061	Nickel	SW-846 6010B	1	132051848004	07/25/2013	20:42	John P Hook	1
07036	Selenium	SW-846 6010B	1	132051848004	07/25/2013	20:42	John P Hook	1
07066	Silver	SW-846 6010B	1	132051848004	07/25/2013	20:42	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132051848004	07/25/2013	20:42	John P Hook	1
00259	Mercury	SW-846 7470A	1	132055713005	07/26/2013	17:19	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132051848004	07/25/2013	06:38	James L Mertz	1
05713	WW SW846 Ha Diaest	SW-846 7470A	1	132055713005	07/25/2013	13.15	Nelli S Markarvan	1



Analysis Report

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

Sample Description: WS-018(Surface)072313 Filt Grab Surface Water

LL Sample # WW 7137410 Mayflower, AR LL Group # 1406226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/23/2013 13:05 by LD ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

-F018 SDG#: PEJ35-11

Submitted: 07/24/2013 09:20

Reported: 07/29/2013 15:14

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	0.0210	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	0.000088 J	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.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132051848004	07/25/2013	20:46	John P Hook	1
07046	Barium	SW-846 6010B	1	132051848004	07/25/2013	20:46	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132051848004	07/25/2013	20:46	John P Hook	1
07051	Chromium	SW-846 6010B	1	132051848004	07/25/2013	20:46	John P Hook	1
07055	Lead	SW-846 6010B	1	132051848004	07/25/2013	20:46	John P Hook	1
07061	Nickel	SW-846 6010B	1	132051848004	07/25/2013	20:46	John P Hook	1
07036	Selenium	SW-846 6010B	1	132051848004	07/25/2013	20:46	John P Hook	1
07066	Silver	SW-846 6010B	1	132051848004	07/25/2013	20:46	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132051848004	07/25/2013	20:46	John P Hook	1
00259	Mercury	SW-846 7470A	1	132055713005	07/26/2013	17:21	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132051848004	07/25/2013	06:38	James L Mertz	1
05713	WW SW846 Ha Digest	SW-846 7470A	1	132055713005	07/25/2013	13.15	Nelli S Markarvan	1



Analysis Report

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

Sample Description: WS-002(Surface)072313 Filt Grab Surface Water

LL Sample # WW 7137411 Mayflower, AR LL Group # 1406226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/23/2013 13:20 by LD ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

-F002 SDG#: PEJ35-12

Submitted: 07/24/2013 09:20

Reported: 07/29/2013 15:14

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	0.0173	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
		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.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	.me	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132051848004	07/25/2013	20:50	John P Hook	1
07046	Barium	SW-846 6010B	1	132051848004	07/25/2013	20:50	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132051848004	07/25/2013	20:50	John P Hook	1
07051	Chromium	SW-846 6010B	1	132051848004	07/25/2013	20:50	John P Hook	1
07055	Lead	SW-846 6010B	1	132051848004	07/25/2013	20:50	John P Hook	1
07061	Nickel	SW-846 6010B	1	132051848004	07/25/2013	20:50	John P Hook	1
07036	Selenium	SW-846 6010B	1	132051848004	07/25/2013	20:50	John P Hook	1
07066	Silver	SW-846 6010B	1	132051848004	07/25/2013	20:50	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132051848004	07/25/2013	20:50	John P Hook	1
00259	Mercury	SW-846 7470A	1	132055713005	07/26/2013	17:23	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132051848004	07/25/2013	06:38	James L Mertz	1
05713	WW SW846 Ha Digest	SW-846 7470A	1	132055713005	07/25/2013	13.15	Nelli S Markarvan	1



Analysis Report

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

Sample Description: WS-007(0.5-1.0)072313 Filt Grab Surface Water

LL Sample # WW 7137412 Mayflower, AR LL Group # 1406226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/23/2013 13:40 by LD ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

-F007 SDG#: PEJ35-13

Submitted: 07/24/2013 09:20

Reported: 07/29/2013 15:14

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	0.0190	0.00033	0.0050	1
07049	Cadmium		7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium		7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead		7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel		7440-02-0	0.0016 J	0.0015	0.0100	1
07036	Selenium		7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver		7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium		7440-62-2	N.D.	0.0020	0.0050	1
		SW-846	7470A	mg/l	mg/l	mg/l	
00259	Mercury		7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

CAT	Analysis Name	Method	Trial#	Batch#	Analysis		Analyst	Dilution
No.					Date and Ti	me		Factor
07035	Arsenic	SW-846 6010B	1	132051848004	07/25/2013	20:53	John P Hook	1
07046	Barium	SW-846 6010B	1	132051848004	07/25/2013	20:53	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132051848004	07/25/2013	20:53	John P Hook	1
07051	Chromium	SW-846 6010B	1	132051848004	07/25/2013	20:53	John P Hook	1
07055	Lead	SW-846 6010B	1	132051848004	07/25/2013	20:53	John P Hook	1
07061	Nickel	SW-846 6010B	1	132051848004	07/25/2013	20:53	John P Hook	1
07036	Selenium	SW-846 6010B	1	132051848004	07/25/2013	20:53	John P Hook	1
07066	Silver	SW-846 6010B	1	132051848004	07/25/2013	20:53	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132051848004	07/25/2013	20:53	John P Hook	1
00259	Mercury	SW-846 7470A	1	132055713005	07/26/2013	17:26	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132051848004	07/25/2013	06:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132055713005	07/25/2013	13:15	Nelli S Markaryan	1



Analysis Report

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

Sample Description: WS-006(0.5-1.0)072313 Filt Grab Surface Water

LL Sample # WW 7137413 Mayflower, AR LL Group # 1406226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/23/2013 13:55 by LD ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

-F006 SDG#: PEJ35-14

Submitted: 07/24/2013 09:20

Reported: 07/29/2013 15:14

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	0.0245	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.

CAT	Analysis Name	Method	Trial#	Batch#	Analysis		Analyst	Dilution
No.					Date and Ti	me		Factor
07035	Arsenic	SW-846 6010B	1	132051848004	07/25/2013	21:05	John P Hook	1
07046	Barium	SW-846 6010B	1	132051848004	07/25/2013	21:05	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132051848004	07/25/2013	21:05	John P Hook	1
07051	Chromium	SW-846 6010B	1	132051848004	07/25/2013	21:05	John P Hook	1
07055	Lead	SW-846 6010B	1	132051848004	07/25/2013	21:05	John P Hook	1
07061	Nickel	SW-846 6010B	1	132051848004	07/25/2013	21:05	John P Hook	1
07036	Selenium	SW-846 6010B	1	132051848004	07/25/2013	21:05	John P Hook	1
07066	Silver	SW-846 6010B	1	132051848004	07/25/2013	21:05	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132051848004	07/25/2013	21:05	John P Hook	1
00259	Mercury	SW-846 7470A	1	132055713005	07/26/2013	17:28	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132051848004	07/25/2013	06:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132055713005	07/25/2013	13:15	Nelli S Markaryan	1



Analysis Report

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

Sample Description: WS-001(0.5-1.0)072313 Filt Grab Surface Water

LL Sample # WW 7137414 Mayflower, AR LL Group # 1406226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/23/2013 14:15 by LD ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

-F001 SDG#: PEJ35-15

Submitted: 07/24/2013 09:20

Reported: 07/29/2013 15:14

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	0.0225	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.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	.me	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132051848004	07/25/2013	21:09	John P Hook	1
07046	Barium	SW-846 6010B	1	132051848004	07/25/2013	21:09	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132051848004	07/25/2013	21:09	John P Hook	1
07051	Chromium	SW-846 6010B	1	132051848004	07/25/2013	21:09	John P Hook	1
07055	Lead	SW-846 6010B	1	132051848004	07/25/2013	21:09	John P Hook	1
07061	Nickel	SW-846 6010B	1	132051848004	07/25/2013	21:09	John P Hook	1
07036	Selenium	SW-846 6010B	1	132051848004	07/25/2013	21:09	John P Hook	1
07066	Silver	SW-846 6010B	1	132051848004	07/25/2013	21:09	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132051848004	07/25/2013	21:09	John P Hook	1
00259	Mercury	SW-846 7470A	1	132055713005	07/26/2013	17:34	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132051848004	07/25/2013	06:38	James L Mertz	1
05713	WW SW846 Ha Digest	SW-846 7470A	1	132055713005	07/25/2013	13.15	Nelli S Markarvan	1



Analysis Report

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Sample Description: DUP-WS-60-072313 Filt Grab Surface Water

LL Sample # WW 7137415 Mayflower, AR LL Group # 1406226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/23/2013 by LD ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

-FD60 SDG#: PEJ35-16FD

Submitted: 07/24/2013 09:20

Reported: 07/29/2013 15:14

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	0.0222	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.

CAT	Analysis Name	Method	Trial#	Batch#	Analysis		Analyst	Dilution
No.					Date and Ti	me		Factor
07035	Arsenic	SW-846 6010B	1	132051848004	07/25/2013	21:12	John P Hook	1
07046	Barium	SW-846 6010B	1	132051848004	07/25/2013	21:12	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132051848004	07/25/2013	21:12	John P Hook	1
07051	Chromium	SW-846 6010B	1	132051848004	07/25/2013	21:12	John P Hook	1
07055	Lead	SW-846 6010B	1	132051848004	07/25/2013	21:12	John P Hook	1
07061	Nickel	SW-846 6010B	1	132051848004	07/25/2013	21:12	John P Hook	1
07036	Selenium	SW-846 6010B	1	132051848004	07/25/2013	21:12	John P Hook	1
07066	Silver	SW-846 6010B	1	132051848004	07/25/2013	21:12	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132051848004	07/25/2013	21:12	John P Hook	1
00259	Mercury	SW-846 7470A	1	132055713005	07/26/2013	17:36	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132051848004	07/25/2013	06:38	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132055713005	07/25/2013	13:15	Nelli S Markaryan	1



Analysis Report

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Sample Description: WS-EB-9-072313 Filt Grab Water

LL Sample # WW 7137416 Mayflower, AR LL Group # 1406226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/23/2013 15:15 by LD ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

-FEB9 SDG#: PEJ35-17EB*

Submitted: 07/24/2013 09:20

Reported: 07/29/2013 15:14

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	N.D.	0.00033	0.0050	1
07049	Cadmium		7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium		7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead		7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel		7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium		7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver		7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium		7440-62-2	N.D.	0.0020	0.0050	1
		SW-846	7470A	mg/l	mg/l	mg/l	
00259	Mercury		7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	.me	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	132051848004	07/25/2013	21:16	John P Hook	1
07046	Barium	SW-846 6010B	1	132051848004	07/25/2013	21:16	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132051848004	07/25/2013	21:16	John P Hook	1
07051	Chromium	SW-846 6010B	1	132051848004	07/25/2013	21:16	John P Hook	1
07055	Lead	SW-846 6010B	1	132051848004	07/25/2013	21:16	John P Hook	1
07061	Nickel	SW-846 6010B	1	132051848004	07/25/2013	21:16	John P Hook	1
07036	Selenium	SW-846 6010B	1	132051848004	07/25/2013	21:16	John P Hook	1
07066	Silver	SW-846 6010B	1	132051848004	07/25/2013	21:16	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132051848004	07/25/2013	21:16	John P Hook	1
00259	Mercury	SW-846 7470A	1	132055713005	07/26/2013	17:38	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132051848004	07/25/2013	06:38	James L Mertz	1
05713	WW SW846 Ha Digest	SW-846 7470A	1	132055713005	07/25/2013	13.15	Nelli S Markarvan	1

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Page 1 of 1

Quality Control Summary

Client Name: ExxonMobil Group Number: 1406226

Reported: 07/29/13 at 03:14 PM

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

Analysis Name	Blank <u>Result</u>	Blank MDL**	Blank <u>LOO</u>	Report <u>Units</u>	LCS %REC	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD Max
Batch number: 132051848004	Sample numl	ber(s): 71	37400-713	7416					
Arsenic	N.D.	0.0068	0.0200	mg/l	99		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	103		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	100		90-112		
Chromium	N.D.	0.0016	0.0150	mg/l	102		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	103		88-110		
Nickel	N.D.	0.0015	0.0100	mg/l	103		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	98		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	97		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	102		90-110		
Batch number: 132055713005	Sample numl	ber(s): 71	.37400-713	7416					
Mercury	N.D.	0.00006 0	0.00020	mg/l	101		80-120		

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

Analysis Name	MS <u>%REC</u>	MSD <u>%REC</u>	MS/MSD <u>Limits</u>	RPD	RPD <u>MAX</u>	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: 132051848004	Sample	number(s)	: 7137400	-71374	16 UNS	PK: 7137406	BKG: 71374	06	
Arsenic	99	100	81-123	0	20	N.D.	N.D.	0 (1)	20
Barium	102	102	78-118	1	20	0.0171	0.0166	3 (1)	20
Cadmium	100	100	83-116	0	20	N.D.	N.D.	0 (1)	20
Chromium	102	103	81-120	1	20	N.D.	N.D.	0 (1)	20
Lead	103	104	75-125	0	20	N.D.	N.D.	0 (1)	20
Nickel	103	103	86-115	0	20	N.D.	N.D.	0 (1)	20
Selenium	96	99	75-125	3	20	N.D.	N.D.	0 (1)	20
Silver	98	97	75-125	1	20	N.D.	N.D.	0 (1)	20
Vanadium	104	103	90-111	1	20	N.D.	N.D.	0 (1)	20
Batch number: 132055713005	Sample	number(s)	: 7137400	-71374	16 UNS	PK: 7137400	BKG: 71374	00	
Mercury	106	105	80-120	1	20	N.D.	N.D.	0 (1)	20

^{*-} Outside of specification

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

⁽¹⁾ The result for one or both determinations was less than five times the LOQ.

⁽²⁾ The unspiked result was more than four times the spike added.

ExxonMobil Analysis Request/Chain of Custody

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ExxonMobil Analysis Request/Chain of Custody

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72 hour	48 hour	24 hour	Relinquished by		$\overline{}$		Date			ime		Receive	t by				Date	Time	
8) Data Package (circ	le if required)	DD (circle if required)	Tremiquiaried by				Date			"IIC		Veceive	a Dy)	Time '	
Type I - Full	1	ocus EIM (default)	Relinquished by	Commercial	Carrier	J		· ***				Receive	-	(1	1	Date). M	Time	v 2 /
Type VI (Raw Data	a) (C	Other	UPS		FedEx		0	ther_				<u> IDI</u>	ren	res	(12)	Nau	11/04	<u> </u>	120
NJ Reduced Other			7	emperat	ure Upon I	Recei	pt <u>©</u>	<u>.) -</u>	36	С			Custod	y Sea	7.1	7	Yes)	No

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	Laboratories

Environmental Sample Administration Receipt Documentation Log

1406226

Client	/Project:	XXX	mobil	Shipping Container Sealed: YES NO							
Date o	of Receipt: _	1)-~	4-13	Custody Seal Present *: YES NO							
Time o	of Receipt: _	9)O	* Custody seal was intact unless otherwise noted in the discrepancy section							
Source	e Code:		50-1	Packag		Chilled	Not Chilled				
						- Common	- Not offined				
	·		I emperature of	Shipping Conta	· · · · · · · · · · · · · · · · · · ·						
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	DHY6	1.5	TB	ω	\rightarrow	13					
2		1.3									
3		2.8									
4		3.6									
5		0,0									
6	\downarrow	1.3	1	1	1						
Paperw	Number of Trip Blanks received NOT listed on chain of custody: Paperwork Discrepancy/Unpacking Problems: Rec 8 Total Fay WS-E13-9-092313 Rec 026-										
Unpack	Unpacker Signature/Emp#: Bully Cully Date/Time: D. 2413 956										



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)
С	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)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

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

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

ppb parts per billion

Dry weight basis

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

Data Qualifiers:

C - result confirmed by reanalysis.

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

U.S. EPA CLP Data Qualifiers:

	Organic Qualifiers		Inorganic Qualifiers
Α	TIC is a possible aldol-condensation product	В	Value is <crdl, but="" th="" ≥idl<=""></crdl,>
В	Analyte was also detected in the blank	E	Estimated due to interference
С	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of	S	Method of standard additions (MSA) used
	the instrument		for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
Р	Concentration difference between primary and	W	Post digestion spike out of control limits
	confirmation columns >25%	*	Duplicate analysis not within control limits
U	Compound was not detected	+	Correlation coefficient for MSA < 0.995
X,Y,Z	Defined in case narrative		

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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