

## ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental  
2425 New Holland Pike  
Lancaster, PA 17601

Prepared for:

ExxonMobil  
Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

July 19, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 07/16/2013  
Group Number: 1404203  
SDG: PEJ09  
PO Number: 4510076246  
Release Number: MAYFLOWER 1406  
State of Sample Origin: AR

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
WS-003(Surface)071513 Filt Grab Surface Water	7127763
WS-011(1.5-2.0)071513 Filt Grab Surface Water	7127764
WS-014(1.5-2.0)071513 Filt Grab Surface Water	7127765
WS-012(1.5-2.0)071513 Filt Grab Surface Water	7127766
WS-010(1.5-2.0)071513 Filt Grab Surface Water	7127767
WS-005(Surface)071513 Filt Grab Surface Water	7127768
WS-002(Surface)071513 Filt Grab Surface Water	7127769
WS-018(1.5-2.0)071513 Filt Grab Surface Water	7127770
WS-001(0.5-1.0)071513 Filt Grab Surface Water	7127771
WS-007(0.5-1.0)071513 Filt Grab Surface Water	7127772
WS-006(0.5-1.0)071513 Filt Grab Surface Water	7127773
DUP-MS-56-071513 Filt Grab Surface Water	7127774
WS-EB-01-071513 Filt Grab Water	7127775

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

ELECTRONIC COPY TO	ARCADIS	Attn: Stephen Barrick
ELECTRONIC COPY TO	ARCADIS	Attn: Lyndi Mott
ELECTRONIC COPY TO	ExxonMobil	Attn: Michael J. Firth
ELECTRONIC COPY TO	ARCADIS	Attn: Emily Leamer
ELECTRONIC COPY TO	ARCADIS	Attn: Rhiannon Parmalee

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

Respectfully Submitted,



Katherine A. Klinefelter  
Principal Specialist

(717) 556-7256

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Project Name: Mayflower, AR Pipeline Incident  
LLI Group #: 1404203

**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:****SW-846 6010B, Metals Dissolved**

Batch #: 131981848002 (Sample number(s): 7127763-7127775 UNSPK: 7127769 BKG: 7127769)

The duplicate RPD for the following analyte(s) exceeded the acceptance window:  
Nickel

Sample Description: WS-003 (Surface) 071513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7127763  
LL Group # 1404203  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/15/2013 08:10 by AP

ExxonMobil  
Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Submitted: 07/16/2013 09:20

Reported: 07/19/2013 15:32

1503F SDG#: PEJ09-01

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	0.0091	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		<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	131981848002	07/18/2013 18:59	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	131981848002	07/18/2013 18:59	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	131981848002	07/18/2013 18:59	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	131981848002	07/18/2013 18:59	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131981848002	07/18/2013 18:59	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	131981848002	07/18/2013 18:59	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	131981848002	07/18/2013 18:59	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	131981848002	07/18/2013 18:59	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	131981848002	07/18/2013 18:59	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	131985713002	07/19/2013 07:42	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131981848002	07/18/2013 10:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131985713002	07/18/2013 15:20	Nelli S Markaryan	1

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

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Sample Description: WS-011(1.5-2.0)071513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7127764  
LL Group # 1404203  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/15/2013 09:55 by AP ExxonMobil  
Mobil Pipeline Company  
Submitted: 07/16/2013 09:20 PO Box 4416  
Reported: 07/19/2013 15:32 Houston TX 77210-4416

1511F SDG#: PEJ09-02

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	0.0109	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	131981848002	07/18/2013 19:03	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	131981848002	07/18/2013 19:03	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	131981848002	07/18/2013 19:03	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	131981848002	07/18/2013 19:03	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131981848002	07/18/2013 19:03	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	131981848002	07/18/2013 19:03	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	131981848002	07/18/2013 19:03	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	131981848002	07/18/2013 19:03	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	131981848002	07/18/2013 19:03	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	131985713002	07/19/2013 07:48	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131981848002	07/18/2013 10:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131985713002	07/18/2013 15:20	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)071513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7127765  
LL Group # 1404203  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/15/2013 10:00 by AP ExxonMobil  
Mobil Pipeline Company  
Submitted: 07/16/2013 09:20 PO Box 4416  
Reported: 07/19/2013 15:32 Houston TX 77210-4416

1514F SDG#: PEJ09-03

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	0.0102	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	0.0015 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
		<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	131981848002	07/18/2013 19:15	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	131981848002	07/18/2013 19:15	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	131981848002	07/18/2013 19:15	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	131981848002	07/18/2013 19:15	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131981848002	07/18/2013 19:15	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	131981848002	07/18/2013 19:15	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	131981848002	07/18/2013 19:15	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	131981848002	07/18/2013 19:15	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	131981848002	07/18/2013 19:15	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	131985713002	07/19/2013 07:50	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131981848002	07/18/2013 10:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131985713002	07/18/2013 15:20	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)071513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7127766  
LL Group # 1404203  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/15/2013 10:20 by AP ExxonMobil  
Mobil Pipeline Company  
Submitted: 07/16/2013 09:20 PO Box 4416  
Reported: 07/19/2013 15:32 Houston TX 77210-4416

1512F SDG#: PEJ09-04

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	0.0130	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
		<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	131981848002	07/18/2013 19:19	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	131981848002	07/18/2013 19:19	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	131981848002	07/18/2013 19:19	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	131981848002	07/18/2013 19:19	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131981848002	07/18/2013 19:19	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	131981848002	07/18/2013 19:19	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	131981848002	07/18/2013 19:19	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	131981848002	07/18/2013 19:19	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	131981848002	07/18/2013 19:19	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	131985713002	07/19/2013 07:53	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131981848002	07/18/2013 10:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131985713002	07/18/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-010(1.5-2.0)071513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7127767  
LL Group # 1404203  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/15/2013 10:45 by AP ExxonMobil  
Mobil Pipeline Company  
Submitted: 07/16/2013 09:20 PO Box 4416  
Reported: 07/19/2013 15:32 Houston TX 77210-4416

1510F SDG#: PEJ09-05

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	0.0117	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	131981848002	07/18/2013 19:23	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	131981848002	07/18/2013 19:23	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	131981848002	07/18/2013 19:23	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	131981848002	07/18/2013 19:23	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131981848002	07/18/2013 19:23	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	131981848002	07/18/2013 19:23	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	131981848002	07/18/2013 19:23	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	131981848002	07/18/2013 19:23	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	131981848002	07/18/2013 19:23	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	131985713002	07/19/2013 07:55	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131981848002	07/18/2013 10:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131985713002	07/18/2013 15:20	Nelli S Markaryan	1

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



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Sample Description: WS-005 (Surface) 071513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7127768  
LL Group # 1404203  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/15/2013 11:45 by AP ExxonMobil  
Mobil Pipeline Company  
Submitted: 07/16/2013 09:20 PO Box 4416  
Reported: 07/19/2013 15:32 Houston TX 77210-4416

1505F SDG#: PEJ09-06

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	0.0060	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	131981848002	07/18/2013 19:27	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	131981848002	07/18/2013 19:27	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	131981848002	07/18/2013 19:27	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	131981848002	07/18/2013 19:27	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131981848002	07/18/2013 19:27	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	131981848002	07/18/2013 19:27	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	131981848002	07/18/2013 19:27	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	131981848002	07/18/2013 19:27	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	131981848002	07/18/2013 19:27	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	131985713002	07/19/2013 07:57	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131981848002	07/18/2013 10:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131985713002	07/18/2013 15:20	Nelli S Markaryan	1

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

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Sample Description: WS-002 (Surface) 071513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7127769  
LL Group # 1404203  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/15/2013 12:10 by AP ExxonMobil  
Mobil Pipeline Company  
Submitted: 07/16/2013 09:20 PO Box 4416  
Reported: 07/19/2013 15:32 Houston TX 77210-4416

1502F SDG#: PEJ09-07

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	0.0084	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		<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	131981848002	07/18/2013 18:36	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	131981848002	07/18/2013 18:36	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	131981848002	07/18/2013 18:36	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	131981848002	07/18/2013 18:36	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131981848002	07/18/2013 18:36	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	131981848002	07/18/2013 18:36	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	131981848002	07/18/2013 18:36	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	131981848002	07/18/2013 18:36	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	131981848002	07/18/2013 18:36	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	131985713002	07/19/2013 07:59	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131981848002	07/18/2013 10:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131985713002	07/18/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-018(1.5-2.0)071513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7127770  
LL Group # 1404203  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/15/2013 12:40 by AP ExxonMobil  
Mobil Pipeline Company  
Submitted: 07/16/2013 09:20 PO Box 4416  
Reported: 07/19/2013 15:32 Houston TX 77210-4416

1518F SDG#: PEJ09-08

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	0.0164	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	131981848002	07/18/2013 19:30	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	131981848002	07/18/2013 19:30	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	131981848002	07/18/2013 19:30	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	131981848002	07/18/2013 19:30	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131981848002	07/18/2013 19:30	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	131981848002	07/18/2013 19:30	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	131981848002	07/18/2013 19:30	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	131981848002	07/18/2013 19:30	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	131981848002	07/18/2013 19:30	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	131985713002	07/19/2013 08:01	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131981848002	07/18/2013 10:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131985713002	07/18/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-001(0.5-1.0)071513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7127771  
LL Group # 1404203  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/15/2013 13:05 by AP

ExxonMobil  
Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Submitted: 07/16/2013 09:20

Reported: 07/19/2013 15:32

1501F SDG#: PEJ09-09

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	0.0089	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	131981848002	07/18/2013 19:34	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	131981848002	07/18/2013 19:34	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	131981848002	07/18/2013 19:34	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	131981848002	07/18/2013 19:34	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131981848002	07/18/2013 19:34	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	131981848002	07/18/2013 19:34	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	131981848002	07/18/2013 19:34	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	131981848002	07/18/2013 19:34	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	131981848002	07/18/2013 19:34	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	131985713002	07/19/2013 08:13	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131981848002	07/18/2013 10:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131985713002	07/18/2013 15:20	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)071513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7127772  
LL Group # 1404203  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/15/2013 13:20 by AP ExxonMobil  
Mobil Pipeline Company  
Submitted: 07/16/2013 09:20 PO Box 4416  
Reported: 07/19/2013 15:32 Houston TX 77210-4416

1507F SDG#: PEJ09-10

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	0.0177	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	0.0015 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
		<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	131981848002	07/18/2013 19:38	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	131981848002	07/18/2013 19:38	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	131981848002	07/18/2013 19:38	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	131981848002	07/18/2013 19:38	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131981848002	07/18/2013 19:38	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	131981848002	07/18/2013 19:38	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	131981848002	07/18/2013 19:38	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	131981848002	07/18/2013 19:38	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	131981848002	07/18/2013 19:38	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	131985713002	07/19/2013 08:15	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131981848002	07/18/2013 10:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131985713002	07/18/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-006(0.5-1.0)071513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7127773  
LL Group # 1404203  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/15/2013 13:40 by AP

ExxonMobil  
Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Submitted: 07/16/2013 09:20

Reported: 07/19/2013 15:32

1506F SDG#: PEJ09-11

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	0.0057	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	131981848002	07/18/2013 19:42	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	131981848002	07/18/2013 19:42	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	131981848002	07/18/2013 19:42	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	131981848002	07/18/2013 19:42	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131981848002	07/18/2013 19:42	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	131981848002	07/18/2013 19:42	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	131981848002	07/18/2013 19:42	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	131981848002	07/18/2013 19:42	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	131981848002	07/18/2013 19:42	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	131985713002	07/19/2013 08:17	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131981848002	07/18/2013 10:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131985713002	07/18/2013 15:20	Nelli S Markaryan	1

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

Sample Description: DUP-MS-56-071513 Filt Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7127774  
LL Group # 1404203  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/15/2013 by AP

ExxonMobil

Mobil Pipeline Company

Submitted: 07/16/2013 09:20

PO Box 4416

Reported: 07/19/2013 15:32

Houston TX 77210-4416

15F56 SDG#: PEJ09-12FD

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	0.0018 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
		<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	131981848002	07/18/2013 19:46	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	131981848002	07/18/2013 19:46	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	131981848002	07/18/2013 19:46	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	131981848002	07/18/2013 19:46	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131981848002	07/18/2013 19:46	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	131981848002	07/18/2013 19:46	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	131981848002	07/18/2013 19:46	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	131981848002	07/18/2013 19:46	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	131981848002	07/18/2013 19:46	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	131985713002	07/19/2013 08:19	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131981848002	07/18/2013 10:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131985713002	07/18/2013 15:20	Nelli S Markaryan	1

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

Sample Description: **WS-EB-01-071513 Filt Grab Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7127775**  
 LL Group # **1404203**  
 Account # **14739**

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

Collected: 07/15/2013 15:25 by AP ExxonMobil  
 Submitted: 07/16/2013 09:20 Mobil Pipeline Company  
 Reported: 07/19/2013 15:32 PO Box 4416  
 Houston TX 77210-4416

15FEB SDG#: PEJ09-13EB\*

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	0.0018 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	131981848002	07/18/2013 19:50	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	131981848002	07/18/2013 19:50	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	131981848002	07/18/2013 19:50	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	131981848002	07/18/2013 19:50	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	131981848002	07/18/2013 19:50	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	131981848002	07/18/2013 19:50	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	131981848002	07/18/2013 19:50	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	131981848002	07/18/2013 19:50	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	131981848002	07/18/2013 19:50	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	131985713002	07/19/2013 08:21	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131981848002	07/18/2013 10:15	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131985713002	07/18/2013 15:20	Nelli S Markaryan	1

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



## Quality Control Summary

Client Name: ExxonMobil  
Reported: 07/19/13 at 03:32 PM

Group Number: 1404203

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: 131981848002	Sample number(s): 7127763-7127775								
Arsenic	N.D.	0.0068	0.0200	mg/l	106		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	102		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	103		90-112		
Chromium	N.D.	0.0016	0.0150	mg/l	102		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	101		88-110		
Nickel	N.D.	0.0015	0.0100	mg/l	105		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	102		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	92		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	104		90-110		
Batch number: 131985713002	Sample number(s): 7127763-7127775								
Mercury	N.D.	0.00006	0.00020	mg/l	103		80-120		
		0							

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike  
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 131981848002	Sample number(s): 7127763-7127775 UNSPK: 7127769 BKG: 7127769								
Arsenic	106	105	81-123	1	20	N.D.	N.D.	0 (1)	20
Barium	102	101	78-118	0	20	0.0084	0.0086	2 (1)	20
Cadmium	102	103	83-116	1	20	N.D.	N.D.	0 (1)	20
Chromium	102	102	81-120	0	20	N.D.	N.D.	0 (1)	20
Lead	101	100	75-125	1	20	N.D.	N.D.	0 (1)	20
Nickel	104	105	86-115	1	20	N.D.	0.0017 J	200* (1)	20
Selenium	104	103	75-125	1	20	N.D.	N.D.	0 (1)	20
Silver	91	92	75-125	2	20	N.D.	N.D.	0 (1)	20
Vanadium	104	105	90-111	1	20	N.D.	N.D.	0 (1)	20
Batch number: 131985713002	Sample number(s): 7127763-7127775 UNSPK: 7127770 BKG: 7127770								
Mercury	104	107	80-120	2	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**

Acct. # 14739

For Lancaster Laboratories use only  
 Group # 1404203 Sample # 7127763-75  
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 PIPELINE INCIDENT</u>				Sediment <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/>				Preservation Code								Preservation Codes 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>								<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 5%;">7</th> <th style="width: 5%;">8</th> <th style="width: 5%;">9</th> <th style="width: 5%;">10</th> <th style="width: 5%;">11</th> <th style="width: 5%;">12</th> <th style="width: 5%;">13</th> <th style="width: 5%;">14</th> <th style="width: 5%;">15</th> <th style="width: 5%;">16</th> <th style="width: 5%;">17</th> <th style="width: 5%;">18</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>										7	8	9	10	11	12	13	14	15	16	17	18																				
7	8	9	10	11	12	13	14									15	16	17	18																														
ExxonMobil PM <u>SCOTT BUSHROE</u>		Cost Center/AFE		Consultant/Office <u>ARCADIS</u>				Consultant PM <u>STEVE BARRICK</u>				Consultant Phone # <u>919 202 6779</u>																																					
Sampler <u>A. PARRINELLO / B. LOVGREN</u>				Total # of Containers <u>VOCs 8260</u> <u>PAHS 8270</u> <u>PCRA METALS + Cu, Ni, V, Mn</u> <u>DISS. METALS *</u>												LAB TO FILTER AND PRESERVE DISS. METALS UPON RECEIPT																																	
2 Sample Identification		3 Collected																Grab	Composite	Soil	Water	Oil																											
Date	Time																																																
<u>WB-EB-01-071513</u>	<u>7/15/13</u>	<u>1525</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																									
<u>WS-TB-77-071513</u>	<u>7/15/13</u>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																									

7 Turnaround Time Requested (TAT) (please circle)			Relinquished by <u>[Signature]</u>		Date <u>7/15/13</u>	Time <u>1630</u>	Received by _____	Date _____	Time _____
Standard	<u>5 day</u>	4 day	Relinquished by _____	Date _____	Time _____	Received by _____	Date _____	Time _____	
72 hour	48 hour	24 hour	Relinquished by _____	Date _____	Time _____	Received by _____	Date _____	Time _____	
8 Data Package (circle if required)			Relinquished by Commercial Carrier		Received by <u>[Signature]</u>		Date <u>7/16/13</u>	Time <u>0920</u>	
Type I - Full	EDD (circle if required)		UPS _____ FedEx <u>X</u> Other _____		Temperature Upon Receipt <u>0.5-2.5 °C</u>		Custody Seals Intact? <u>Yes</u> No		
Type VI (Raw Data)	Locus EIM (default)								
NJ Reduced	Other _____								
Other _____									

Environmental Sample Administration 1404203  
 Receipt Documentation Log

Client/Project: XOM

Shipping Container Sealed:  YES NO

Date of Receipt: 7/16/13

Custody Seal Present \* :  YES NO

Time of Receipt: 0920

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

Source Code: SO-1

Package:  Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT121	2.5	TB	WI	Y	B	
2	↓	0.5	↓	↓	↓	↓	
3	<del>_____</del>						
4	<del>_____</del>						
5	<del>_____</del>						
6	<del>_____</del>						

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

Paperwork Discrepancy/Unpacking Problems:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Unpacker Signature/Emp#: DA Neslund / 208 Date/Time: 7/16/13 / 0930

Issued by Dept. 6042 Management

# 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>m<sup>3</sup></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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