



Lancaster Laboratories  
Environmental

# Analysis Report

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

REVISED

## 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 05, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 06/13/2013

Group Number: 1396775

SDG: PEI19

PO Number: 4510076246

Release Number: MAYFLOWER 1406

State of Sample Origin: AR

### Client Sample Description

WS-003(Surface)061213 Grab Surface Water  
WS-002(Surface)061213 Grab Surface Water  
WS-BKG-002(Surface)061213 Grab Surface Water  
WS-005(Surface)061213 Grab Surface Water  
WS-008(Surface)061213 Grab Surface Water  
WS-008(Surface)061213MS Grab Surface Water  
WS-008(Surface)061213MSD Grab Surface Water  
WS-008(Surface)061213DUP Grab Surface Water  
WS-001(Surface)061213 Grab Surface Water  
WS-001(0.5-1.0)061213 Grab Surface Water  
WS-004(Surface)061213 Grab Surface Water  
WS-004(0.5-1.0)061213 Grab Surface Water  
WS-007(Surface)061213 Grab Surface Water  
WS-007(0.5-1.0)061213 Grab Surface Water  
WS-006(Surface)061213 Grab Surface Water  
WS-006(0.5-1.0)061213 Grab Surface Water  
WS-TB-71-061213 Water

### Lancaster Labs (LL) #

7091213  
7091214  
7091215  
7091216  
7091217  
7091218  
7091219  
7091220  
7091221  
7091222  
7091223  
7091224  
7091225  
7091226  
7091227  
7091228  
7091229

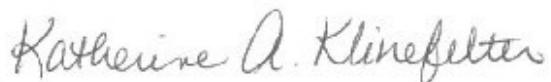
The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC      ARCADIS  
COPY TO  
ELECTRONIC      ARCADIS  
COPY TO  
ELECTRONIC      ExxonMobil  
COPY TO

Attn: Stephen Barrick  
Attn: Lyndi Mott  
Attn: Michael J. Firth

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

Respectfully Submitted,



Katherine A. Klinefelter  
Principal Specialist

(717) 556-7256

---

Project Name: Mayflower, AR Pipeline Incident  
LLI Group #: 1396775

**General Comments:**

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

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

Project specific QC samples are included in this data set

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

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

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

**Analysis Specific Comments:****SW-846 8260B 25mL purge, GC/MS Volatiles**

Batch #: G131651AA (Sample number(s): 7091213-7091219, 7091221-7091229 UNSPK:  
7091217)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: Allyl Chloride, 2-Butanone

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: Allyl Chloride, 4-Chlorotoluene

**SW-846 8270C SIM, GC/MS Semivolatiles**

Batch #: 13164WAK026 (Sample number(s): 7091213-7091219, 7091221-7091228 UNSPK:  
7091217)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: Acenaphthylene

**SW-846 6010B, Metals**

Batch #: 131641848001 (Sample number(s): 7091213-7091228 UNSPK: 7091217 BKG:  
7091217)

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

July 8, 2013

Ms. Lyndi Mott  
ARCADIS  
2929 Briarpark Drive, Suite 300  
Houston, TX 77042

Dear Ms. Mott:

I am writing to inform you of revised analytical reports that are being issued for the following:

**Project: Mayflower, AR Pipeline Incident**

**Group No.: 1396775,1397455,1399494,1397668,1397806,1398443,1398099**

**SDG No.: various**

The correction to the data affects the PAHs in water by SIM analysis only.

During an additional review of this data it was determined that the peaks used to quantify benzo(b)fluoranthene, benzo(k)fluoranthene and benzo(a)pyrene were assigned incorrectly on the GC/MS, instrument 11165. This error was made during the calibration of this GC/MS on June 20, 2013 and was discovered on June 27, 2013. Including matrix spike and matrix spike duplicates, 28 samples had reportable concentrations of at least one of these compounds. See Attachment I for the original and revised concentrations of these 3 compounds in those 28 samples. These compounds were not detected in the other samples analyzed during this timeframe except for QC spikes. The revision did not cause any QC that recovered within the quality control limits originally to now be outside of specification. The initial calibrations, all affected QC, and sample data were corrected. The revised analytical reports reflect this correction and are enclosed. Revised EDDs and data packages will also be re-submitted.

In addition, at the request of the client, in the instances where no sample results changed but quality control data was impacted, only the data packages will be revised and resent . See Attachment II for a list of those sample delivery groups

Our quality control department has initiated an investigation of this issue and will provide an investigation summary letter upon completion.

The revised analytical report reflects this correction and is enclosed.



Lancaster Laboratories  
Environmental

Page 2  
Ms. Lyndi Mott  
July 8, 2013

You are a valued client and we apologize for any inconvenience that this incident may have caused. If you have any questions or require further assistance, please call me at 717-656-2300, Ext. 1892. We appreciate your business and look forward to continuing to serve your laboratory needs.

Sincerely,

Richard Karam  
Manager  
Environmental Sciences

RK/slw  
Enclosures

cc: Stephen Barrick (email)  
Michael Firth (email)  
Julie Foster (email)  
Kathy Klinefelter (email)  
Emily Leamer (email)  
Rhiannon Parmalee (email)  
Jamie Pritchard (email)  
Michael Sixsmith (email)  
Carl Wideman (email)

**ATTACHMENT I**

<b>SDG</b>	<b>Group</b>	<b>ELLE Sample No.</b>	<b>Client Sample Identification</b>	<b>Compound Name</b>	<b>Original Result (ug/L)</b>	<b>Revised Result (ug/L)</b>
PEI19	1396775	7091218	WS-008(Surface)061213MS Grab Surface Water	Benzo(b)fluoranthene	0.77	0.9
PEI19	1396775	7091218	WS-008(Surface)061213MS Grab Surface Water	Benzo(k)fluoranthene	0.68	0.82
PEI19	1396775	7091218	WS-008(Surface)061213MS Grab Surface Water	Benzo(a)pyrene	0.82	0.69
PEI19	1396775	7091219	WS-008(Surface)061213MSD Grab Surface Water	Benzo(b)fluoranthene	0.79	0.91
PEI19	1396775	7091219	WS-008(Surface)061213MSD Grab Surface Water	Benzo(k)fluoranthene	0.73	0.86
PEI19	1396775	7091219	WS-008(Surface)061213MSD Grab Surface Water	Benzo(a)pyrene	0.87	0.72
PEI19	1396775	7091224	WS-004(0.5-1.0)061213 Grab Surface Water	Benzo(b)fluoranthene	N.D.	0.011 J
PEI19	1396775	7091226	WS-007(0.5-1.0)061213 Grab Surface Water	Benzo(b)fluoranthene	0.2	0.4
PEI19	1396775	7091226	WS-007(0.5-1.0)061213 Grab Surface Water	Benzo(k)fluoranthene	0.12	0.13
PEI19	1396775	7091226	WS-007(0.5-1.0)061213 Grab Surface Water	Benzo(a)pyrene	0.13	0.12
PEI23	1397455	7094720	WS-007(Surface)061413 Grab Surface Water	Benzo(b)fluoranthene	0.11	0.24
PEI23	1397455	7094720	WS-007(Surface)061413 Grab Surface Water	Benzo(k)fluoranthene	0.071	0.072
PEI23	1397455	7094720	WS-007(Surface)061413 Grab Surface Water	Benzo(a)pyrene	0.076	0.069
PEI23	1397455	7094721	WS-007(Surface)061413 MS Grab Surface Water	Benzo(b)fluoranthene	0.75	0.92
PEI23	1397455	7094721	WS-007(Surface)061413 MS Grab Surface Water	Benzo(k)fluoranthene	0.74	0.82
PEI23	1397455	7094721	WS-007(Surface)061413 MS Grab Surface Water	Benzo(a)pyrene	0.78	0.77
PEI23	1397455	7094722	WS-007(Surface)061413 MSD Grab Surface Water	Benzo(b)fluoranthene	0.7	0.88
PEI23	1397455	7094722	WS-007(Surface)061413 MSD Grab Surface Water	Benzo(k)fluoranthene	0.74	0.78
PEI23	1397455	7094722	WS-007(Surface)061413 MSD Grab Surface Water	Benzo(a)pyrene	0.74	0.73
PEI23	1397455	7094724	WS-007(0.5-1.0)061413 Grab Surface Water	Benzo(b)fluoranthene	0.61	1.3
PEI23	1397455	7094724	WS-007(0.5-1.0)061413 Grab Surface Water	Benzo(k)fluoranthene	0.41	0.4

SDG	Group	ELLE Sample No.	Client Sample Identification	Compound Name	Original Result (ug/L)	Revised Result (ug/L)
PEI23	1397455	7094724	WS-007(0.5-1.0)061413 Grab Surface Water	Benzo(a)pyrene	0.41	0.4
PEI28	1397668	7095864	WS-004(Surface)061513 Grab Surface Water	Benzo(b)fluoranthene	0.011 J	0.022 J
PEI28	1397668	7095865	WS-004(0.5-1.0)061513 Grab Surface Water	Benzo(b)fluoranthene	0.015 J	0.029 J
PEI28	1397668	7095865	WS-004(0.5-1.0)061513 Grab Surface Water	Benzo(k)fluoranthene	0.012 J	0.011 J
PEI28	1397668	7095865	WS-004(0.5-1.0)061513 Grab Surface Water	Benzo(a)pyrene	0.011 J	0.012 J
PEI28	1397668	7095866	WS-007(Surface)061513 Grab Surface Water	Benzo(b)fluoranthene	0.020 J	0.039 J
PEI28	1397668	7095866	WS-007(Surface)061513 Grab Surface Water	Benzo(k)fluoranthene	0.011 J	0.014 J
PEI28	1397668	7095866	WS-007(Surface)061513 Grab Surface Water	Benzo(a)pyrene	0.013 J	N.D.
PEI28	1397668	7095867	WS-007(0.5-1.0)061513 Grab Surface Water	Benzo(b)fluoranthene	4.2	11
PEI28	1397668	7095867	WS-007(0.5-1.0)061513 Grab Surface Water	Benzo(k)fluoranthene	2.5	3.4
PEI28	1397668	7095867	WS-007(0.5-1.0)061513 Grab Surface Water	Benzo(a)pyrene	3.1	2.5
PEI28	1397668	7095870	DUP-WS-41-061513 Grab Surface Water	Benzo(b)fluoranthene	0.026 J	0.049 J
PEI28	1397668	7095870	DUP-WS-41-061513 Grab Surface Water	Benzo(a)pyrene	0.016 J	N.D.
PEI28	1397668	7095877	WS-004(0.5-1.0)061613 Grab Surface Water	Benzo(b)fluoranthene	0.020 J	0.036 J
PEI28	1397668	7095877	WS-004(0.5-1.0)061613 Grab Surface Water	Benzo(k)fluoranthene	0.016 J	0.013 J
PEI28	1397668	7095877	WS-004(0.5-1.0)061613 Grab Surface Water	Benzo(a)pyrene	0.014 J	0.015 J
PEI28	1397668	7095878	WS-007(Surface)061613 Grab Surface Water	Benzo(b)fluoranthene	0.11	0.27
PEI28	1397668	7095878	WS-007(Surface)061613 Grab Surface Water	Benzo(k)fluoranthene	0.050 J	0.09
PEI28	1397668	7095878	WS-007(Surface)061613 Grab Surface Water	Benzo(a)pyrene	0.082	0.052
PEI28	1397668	7095879	WS-007(Surface)061613 MS Grab Surface Water	Benzo(b)fluoranthene	0.83	1.1
PEI28	1397668	7095879	WS-007(Surface)061613 MS Grab Surface Water	Benzo(k)fluoranthene	0.89	0.88
PEI28	1397668	7095879	WS-007(Surface)061613 MS Grab Surface Water	Benzo(a)pyrene	0.86	0.9

SDG	Group	ELLE Sample No.	Client Sample Identification	Compound Name	Original Result (ug/L)	Revised Result (ug/L)
PEI28	1397668	7095880	WS-007(Surface)061613 MSD Grab Surface Water	Benzo(b)fluoranthene	0.88	1.1
PEI28	1397668	7095880	WS-007(Surface)061613 MSD Grab Surface Water	Benzo(k)fluoranthene	0.94	1.1
PEI28	1397668	7095880	WS-007(Surface)061613 MSD Grab Surface Water	Benzo(a)pyrene	1	0.94
PEI28	1397668	7095882	WS-007(0.5-1.0)061613 Grab Surface Water	Benzo(b)fluoranthene	1.5	3.7
PEI28	1397668	7095882	WS-007(0.5-1.0)061613 Grab Surface Water	Benzo(k)fluoranthene	0.97	1.4
PEI28	1397668	7095882	WS-007(0.5-1.0)061613 Grab Surface Water	Benzo(a)pyrene	1.2	0.89
PEI30	1397806	7096390	WS-004(0.5-1.0)061713 Grab Surface Water	Benzo(b)fluoranthene	0.026 J	0.041 J
PEI30	1397806	7096390	WS-004(0.5-1.0)061713 Grab Surface Water	Benzo(k)fluoranthene	0.019 J	0.021 J
PEI30	1397806	7096390	WS-004(0.5-1.0)061713 Grab Surface Water	Benzo(a)pyrene	0.020 J	0.018 J
PEI30	1397806	7096391	WS-007(Surface)061713 Grab Surface Water	Benzo(b)fluoranthene	0.015 J	0.021 J
PEI30	1397806	7096391	WS-007(Surface)061713 Grab Surface Water	Benzo(a)pyrene	0.011 J	N.D.
PEI30	1397806	7096392	WS-007(0.5-1.0)061713 Grab Surface Water	Benzo(b)fluoranthene	0.67	1.6
PEI30	1397806	7096392	WS-007(0.5-1.0)061713 Grab Surface Water	Benzo(k)fluoranthene	0.39	0.49
PEI30	1397806	7096392	WS-007(0.5-1.0)061713 Grab Surface Water	Benzo(a)pyrene	0.48	0.39
PEI30	1397806	7096395	DUP-WS-42-061713 Grab Surface Water	Benzo(b)fluoranthene	0.011 J	0.013 J
PEI32	1398099	7097737	WS-003(Surface)061813 Grab Surface Water	Benzo(b)fluoranthene	N.D.	0.014 J
PEI32	1398099	7097741	WS-008(Surface)061813MS Grab Surface Water	Benzo(b)fluoranthene	0.96	1.1
PEI32	1398099	7097741	WS-008(Surface)061813MS Grab Surface Water	Benzo(k)fluoranthene	0.51	0.99
PEI32	1398099	7097741	WS-008(Surface)061813MS Grab Surface Water	Benzo(a)pyrene	0.96	0.52
PEI32	1398099	7097742	WS-008(Surface)061813MSD Grab Surface Water	Benzo(b)fluoranthene	0.88	1
PEI32	1398099	7097742	WS-008(Surface)061813MSD Grab Surface Water	Benzo(k)fluoranthene	0.47	1
PEI32	1398099	7097742	WS-008(Surface)061813MSD Grab Surface Water	Benzo(a)pyrene	0.98	0.48

SDG	Group	ELLE Sample No.	Client Sample Identification	Compound Name	Original Result (ug/L)	Revised Result (ug/L)
PEI32	1398099	7097749	WS-007(0.5-1.0)061813 Grab Surface Water	Benzo(b)fluoranthene	0.22	0.45
PEI32	1398099	7097749	WS-007(0.5-1.0)061813 Grab Surface Water	Benzo(k)fluoranthene	0.13	0.16
PEI32	1398099	7097749	WS-007(0.5-1.0)061813 Grab Surface Water	Benzo(a)pyrene	0.16	0.13
PEI34	1398443	7099555	SO-NS40-EA-RB-01-061913 Grab Water	Benzo(a)pyrene	0.014 J	N.D.
PEI48	1399494	7105849	WG-NS50-PH-062413 Grab Groundwater	Benzo(b)fluoranthene	0.051 J	0.12
PEI48	1399494	7105849	WG-NS50-PH-062413 Grab Groundwater	Benzo(k)fluoranthene	0.051 J	0.049 J
PEI48	1399494	7105849	WG-NS50-PH-062413 Grab Groundwater	Benzo(a)pyrene	0.046 J	0.049 J

## ATTACHMENT II

### Sample delivery groups that will have revised raw data packages only.

Note: No sample results changed but quality control data was impacted.

Group	SDG
1396416	PEI16
1396792	PEI20
1397456	PEI25
1398761	PEI38
1399117	PEI41
1397675	PEI26
1397807	PEI31
1398111	PEI33

**Sample Description:** WS-003 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091213  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 07:00 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12003 SDG#: PEI19-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l		
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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

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

REVISED

**Sample Description:** WS-003 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091213  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 07:00 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12003 SDG#: PEI19-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>	<b>SW-846 8260B 25mL purge</b>		ug/l	ug/l	ug/l	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
<b>GC/MS Semivolatiles</b>	<b>SW-846 8270C SIM</b>		ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1
<b>Metals</b>	<b>SM 2340 B-1997</b>		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO <sub>3</sub>	471-34-1	20.3	0.064	0.20	1
	<b>SW-846 6010B</b>		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0172	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00036	0.0050	1
01750	Calcium	7440-70-2	4.47	0.0640	0.200	1

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



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

REVISED

**Sample Description:** WS-003 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091213  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 07:00 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416

Reported: 07/05/2013 08:33

Houston TX 77210-4416

12003 SDG#: PEI19-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07051	Chromium	7440-47-3	N.D.	0.0011	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0051	0.0150	1
01757	Magnesium	7439-95-4	2.21	0.0606	0.100	1
07061	Nickel	7440-02-0	0.0011 J	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0013	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.	0.000070	0.00020	1

#### General Sample Comments

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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G131651AA	06/14/2013 15:46	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G131651AA	06/14/2013 15:46	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13164WAK026	06/20/2013 14:04	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13164WAK026	06/14/2013 09:00	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	131686256010	06/17/2013 07:45	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	131641848001	06/14/2013 23:01	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	131641848001	06/14/2013 13:43	Joanne M Gates	1
07049	Cadmium	SW-846 6010B	1	131641848001	06/14/2013 23:01	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	131641848001	06/14/2013 13:43	Joanne M Gates	1
07051	Chromium	SW-846 6010B	1	131641848001	06/14/2013 13:43	Joanne M Gates	1
07055	Lead	SW-846 6010B	1	131641848001	06/14/2013 13:43	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	131641848001	06/17/2013 00:39	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	131641848001	06/14/2013 13:43	Joanne M Gates	1
07036	Selenium	SW-846 6010B	1	131641848001	06/14/2013 13:43	Joanne M Gates	1
07066	Silver	SW-846 6010B	1	131641848001	06/14/2013 13:43	Joanne M Gates	1
07071	Vanadium	SW-846 6010B	1	131641848001	06/14/2013 13:43	Joanne M Gates	1
00259	Mercury	SW-846 7470A	1	131645713005	06/15/2013 06:27	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131641848001	06/13/2013 23:50	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131645713005	06/14/2013 15:30	Nelli S Markaryan	1

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

**Sample Description:** WS-002 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091214  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 07:20 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12002 SDG#: PEI19-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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

**Sample Description:** WS-002 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091214  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 07:20 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416

Reported: 07/05/2013 08:33

Houston TX 77210-4416

12002 SDG#: PEI19-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>	<b>SW-846 8260B 25mL purge</b>		ug/l	ug/l	ug/l	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
<b>GC/MS Semivolatiles</b>	<b>SW-846 8270C SIM</b>		ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
<b>Metals</b>	<b>SM 2340 B-1997</b>		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO <sub>3</sub>	471-34-1	19.7	0.064	0.20	1
	<b>SW-846 6010B</b>		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0154	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00036	0.0050	1
01750	Calcium	7440-70-2	4.33	0.0640	0.200	1

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



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

REVISED

**Sample Description:** WS-002 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091214  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 07:20 by TM

ExxonMobil

Mobil Pipeline Company  
PO Box 4416

Submitted: 06/13/2013 09:15

Houston TX 77210-4416

Reported: 07/05/2013 08:33

12002 SDG#: PEI19-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07051	Chromium	7440-47-3	N.D.	0.0011	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0051	0.0150	1
01757	Magnesium	7439-95-4	2.15	0.0606	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0013	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.	0.000070	0.00020	1

#### General Sample Comments

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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G131651AA	06/14/2013 16:07	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G131651AA	06/14/2013 16:07	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13164184K026	06/20/2013 14:33	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13164184K026	06/14/2013 09:00	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	131686256010	06/17/2013 07:45	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	131641848001	06/14/2013 23:12	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	131641848001	06/14/2013 13:55	Joanne M Gates	1
07049	Cadmium	SW-846 6010B	1	131641848001	06/14/2013 23:12	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	131641848001	06/14/2013 13:55	Joanne M Gates	1
07051	Chromium	SW-846 6010B	1	131641848001	06/14/2013 13:55	Joanne M Gates	1
07055	Lead	SW-846 6010B	1	131641848001	06/14/2013 13:55	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	131641848001	06/17/2013 00:43	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	131641848001	06/14/2013 13:55	Joanne M Gates	1
07036	Selenium	SW-846 6010B	1	131641848001	06/14/2013 13:55	Joanne M Gates	1
07066	Silver	SW-846 6010B	1	131641848001	06/14/2013 13:55	Joanne M Gates	1
07071	Vanadium	SW-846 6010B	1	131641848001	06/14/2013 13:55	Joanne M Gates	1
00259	Mercury	SW-846 7470A	1	131645713005	06/15/2013 06:29	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131641848001	06/13/2013 23:50	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131645713005	06/14/2013 15:30	Nelli S Markaryan	1

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

**Sample Description:** WS-BKG-002 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091215  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 07:50 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416

Reported: 07/05/2013 08:33

Houston TX 77210-4416

12BK2 SDG#: PEI19-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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



**Sample Description:** WS-BKG-002 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091215  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 07:50 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416

Reported: 07/05/2013 08:33

Houston TX 77210-4416

12BK2 SDG#: PEI19-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>	<b>SW-846 8260B 25mL purge</b>		ug/l	ug/l	ug/l	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
<b>GC/MS Semivolatiles</b>	<b>SW-846 8270C SIM</b>		ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1
<b>Metals</b>	<b>SM 2340 B-1997</b>		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO <sub>3</sub>	471-34-1	37.8	0.064	0.20	1
	<b>SW-846 6010B</b>		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0424	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00036	0.0050	1
01750	Calcium	7440-70-2	8.90	0.0640	0.200	1

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



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

REVISED

**Sample Description:** WS-BKG-002 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091215  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 07:50 by TM

ExxonMobil

Mobil Pipeline Company  
PO Box 4416

Submitted: 06/13/2013 09:15

Houston TX 77210-4416

Reported: 07/05/2013 08:33

12BK2 SDG#: PEI19-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07051	Chromium	7440-47-3	0.0016 J	0.0011	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0051	0.0150	1
01757	Magnesium	7439-95-4	3.78	0.0606	0.100	1
07061	Nickel	7440-02-0	0.0032 J	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	0.0039 J	0.0013	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.	0.000070	0.00020	1

#### General Sample Comments

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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G131651AA	06/14/2013 16:29	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G131651AA	06/14/2013 16:29	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13164WAK026	06/20/2013 15:02	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13164WAK026	06/14/2013 09:00	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	131686256010	06/17/2013 07:45	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	131641848001	06/14/2013 23:16	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	131641848001	06/14/2013 13:58	Joanne M Gates	1
07049	Cadmium	SW-846 6010B	1	131641848001	06/14/2013 23:16	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	131641848001	06/14/2013 13:58	Joanne M Gates	1
07051	Chromium	SW-846 6010B	1	131641848001	06/14/2013 13:58	Joanne M Gates	1
07055	Lead	SW-846 6010B	1	131641848001	06/14/2013 13:58	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	131641848001	06/17/2013 00:47	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	131641848001	06/14/2013 13:58	Joanne M Gates	1
07036	Selenium	SW-846 6010B	1	131641848001	06/14/2013 13:58	Joanne M Gates	1
07066	Silver	SW-846 6010B	1	131641848001	06/14/2013 13:58	Joanne M Gates	1
07071	Vanadium	SW-846 6010B	1	131641848001	06/14/2013 13:58	Joanne M Gates	1
00259	Mercury	SW-846 7470A	1	131645713005	06/15/2013 06:31	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131641848001	06/13/2013 23:50	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131645713005	06/14/2013 15:30	Nelli S Markaryan	1

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

**Sample Description:** WS-005 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091216  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 08:00 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416

Reported: 07/05/2013 08:33

Houston TX 77210-4416

12005 SDG#: PEI19-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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



**Sample Description:** WS-005 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091216  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 08:00 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12005 SDG#: PEI19-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>	<b>SW-846 8260B 25mL purge</b>		ug/l	ug/l	ug/l	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
<b>GC/MS Semivolatiles</b>	<b>SW-846 8270C SIM</b>		ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.050	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.050	1
08357	Anthracene	120-12-7	N.D.	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.050	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.050	1
08357	Chrysene	218-01-9	N.D.	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.050	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.050	1
08357	Fluorene	86-73-7	N.D.	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.050	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.050	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.050	1
08357	Pyrene	129-00-0	N.D.	0.010	0.050	1
<b>Metals</b>	<b>SM 2340 B-1997</b>		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO <sub>3</sub>	471-34-1	21.0	0.064	0.20	1
	<b>SW-846 6010B</b>		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0143	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00036	0.0050	1
01750	Calcium	7440-70-2	4.79	0.0640	0.200	1

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



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

REVISED

**Sample Description:** WS-005 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091216  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 08:00 by TM

ExxonMobil

Mobil Pipeline Company  
PO Box 4416

Submitted: 06/13/2013 09:15

Houston TX 77210-4416

Reported: 07/05/2013 08:33

12005 SDG#: PEI19-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07051	Chromium	7440-47-3	N.D.	0.0011	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0051	0.0150	1
01757	Magnesium	7439-95-4	2.20	0.0606	0.100	1
07061	Nickel	7440-02-0	0.0016 J	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0013	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	0.000074 J	0.000070	0.000020	1

### General Sample Comments

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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G131651AA	06/14/2013 16:50	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G131651AA	06/14/2013 16:50	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13164WAK026	06/20/2013 15:32	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13164WAK026	06/14/2013 09:00	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	131686256010	06/17/2013 07:45	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	131641848001	06/14/2013 23:20	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	131641848001	06/14/2013 14:02	Joanne M Gates	1
07049	Cadmium	SW-846 6010B	1	131641848001	06/14/2013 23:20	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	131641848001	06/14/2013 14:02	Joanne M Gates	1
07051	Chromium	SW-846 6010B	1	131641848001	06/14/2013 14:02	Joanne M Gates	1
07055	Lead	SW-846 6010B	1	131641848001	06/14/2013 14:02	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	131641848001	06/17/2013 00:50	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	131641848001	06/14/2013 14:02	Joanne M Gates	1
07036	Selenium	SW-846 6010B	1	131641848001	06/14/2013 14:02	Joanne M Gates	1
07066	Silver	SW-846 6010B	1	131641848001	06/14/2013 14:02	Joanne M Gates	1
07071	Vanadium	SW-846 6010B	1	131641848001	06/14/2013 14:02	Joanne M Gates	1
00259	Mercury	SW-846 7470A	1	131645713005	06/15/2013 06:33	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131641848001	06/13/2013 23:50	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131645713005	06/14/2013 15:30	Nelli S Markaryan	1

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

**Sample Description:** WS-008 (Surface) 061213 Grab Surface Water  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # WW 7091217  
 LL Group # 1396775  
 Account # 14739

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

Collected: 06/12/2013 08:30 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
 PO Box 4416  
 Houston TX 77210-4416

Reported: 07/05/2013 08:33

12008 SDG#: PEI19-05BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	5.7	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	0.2 J	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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



**Sample Description:** WS-008 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091217  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 08:30 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12008 SDG#: PEI19-05BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>	<b>SW-846 8260B 25mL purge</b>		ug/l	ug/l	ug/l	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
<b>GC/MS Semivolatiles</b>	<b>SW-846 8270C SIM</b>		ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	0.025 J	0.010	0.052	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.052	1
08357	Anthracene	120-12-7	0.016 J	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.052	1
08357	Chrysene	218-01-9	0.012 J	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.052	1
08357	Fluoranthene	206-44-0	0.029 J	0.010	0.052	1
08357	Fluorene	86-73-7	0.020 J	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	0.015 J	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.052	1
08357	Naphthalene	91-20-3	0.088	0.031	0.052	1
08357	Phenanthrene	85-01-8	0.039 J	0.031	0.052	1
08357	Pyrene	129-00-0	0.021 J	0.010	0.052	1
<b>Metals</b>	<b>SM 2340 B-1997</b>		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO <sub>3</sub>	471-34-1	69.3	0.064	0.20	1
	<b>SW-846 6010B</b>		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0505	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00036	0.0050	1
01750	Calcium	7440-70-2	15.9	0.0640	0.200	1

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



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

REVISED

Sample Description: WS-008 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091217  
LL Group # 1396775  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 06/12/2013 08:30 by TM

ExxonMobil

Mobil Pipeline Company  
PO Box 4416

Submitted: 06/13/2013 09:15  
Reported: 07/05/2013 08:33

Houston TX 77210-4416

12008 SDG#: PEI19-05BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07051	Chromium	7440-47-3	N.D.	0.0011	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0051	0.0150	1
01757	Magnesium	7439-95-4	7.20	0.0606	0.100	1
07061	Nickel	7440-02-0	0.0036 J	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	0.0013 J	0.0013	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.	0.000070	0.00020	1

#### General Sample Comments

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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G131651AA	06/14/2013 13:58	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G131651AA	06/14/2013 13:58	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13164184K026	06/20/2013 12:35	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13164184K026	06/14/2013 09:00	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO <sub>3</sub>	SM 2340 B-1997	1	131686256010	06/17/2013 07:45	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	131641848001	06/14/2013 22:34	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	131641848001	06/14/2013 13:17	Joanne M Gates	1
07049	Cadmium	SW-846 6010B	1	131641848001	06/14/2013 22:34	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	131641848001	06/14/2013 13:17	Joanne M Gates	1
07051	Chromium	SW-846 6010B	1	131641848001	06/14/2013 13:17	Joanne M Gates	1
07055	Lead	SW-846 6010B	1	131641848001	06/14/2013 13:17	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	131641848001	06/17/2013 00:05	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	131641848001	06/14/2013 13:17	Joanne M Gates	1
07036	Selenium	SW-846 6010B	1	131641848001	06/14/2013 13:17	Joanne M Gates	1
07066	Silver	SW-846 6010B	1	131641848001	06/14/2013 13:17	Joanne M Gates	1
07071	Vanadium	SW-846 6010B	1	131641848001	06/14/2013 13:17	Joanne M Gates	1
00259	Mercury	SW-846 7470A	1	131645713005	06/15/2013 06:35	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131641848001	06/13/2013 23:50	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131645713005	06/14/2013 15:30	Nelli S Markaryan	1

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

**Sample Description:** WS-008 (Surface) 061213MS Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091218  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 08:30 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12008 SDG#: PEI19-05MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	44	3.0	5.0	1
02898	Allyl Chloride	107-05-1	7.1	0.1	0.5	1
02898	Benzene	71-43-2	5.4	0.1	0.5	1
02898	Bromobenzene	108-86-1	5.4	0.1	0.5	1
02898	Bromochloromethane	74-97-5	5.3	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	5.2	0.1	0.5	1
02898	Bromoform	75-25-2	5.2	0.1	0.5	1
02898	Bromomethane	74-83-9	4.8	0.1	0.5	1
02898	2-Butanone	78-93-3	43	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	6.1	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	6.1	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	5.9	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	6.1	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.4	0.1	0.5	1
02898	Chloroethane	75-00-3	5.2	0.1	0.5	1
02898	Chloroform	67-66-3	5.7	0.1	0.5	1
02898	Chloromethane	74-87-3	5.0	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.8	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.9	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	5.1	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	5.3	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	4.8	0.1	0.5	1
02898	Dibromomethane	74-95-3	4.8	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.4	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.7	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.5	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	4.2	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.7	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	5.0	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	6.2	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	5.5	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	5.9	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	5.9	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.6	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	5.1	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	5.5	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	5.9	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	5.1	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	4.8	0.1	0.5	1
02898	Ethyl ether	60-29-7	4.8	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.6	0.1	0.5	1
02898	Freon 113	76-13-1	5.7	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	5.5	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	5.6	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	6.0	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	4.9	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	23	1.0	5.0	1
02898	Methylene Chloride	75-09-2	5.5	0.2	0.5	1

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



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

REVISED

**Sample Description:** WS-008 (Surface) 061213MS Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091218  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 08:30 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12008 SDG#: PEI19-05MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>	<b>SW-846 8260B 25mL purge</b>		ug/l	ug/l	ug/l	
02898	n-Propylbenzene	103-65-1	6.2	0.1	0.5	1
02898	Styrene	100-42-5	5.5	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	5.4	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	5.3	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	5.2	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	30	2.0	5.0	1
02898	Toluene	108-88-3	5.7	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	4.6	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	5.0	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	5.6	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	5.0	0.1	0.5	1
02898	Trichloroethene	79-01-6	5.7	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	5.1	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	5.1	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	5.9	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	6.0	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	5.2	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	17	0.1	0.5	1
<b>GC/MS Semivolatiles</b>	<b>SW-846 8270C SIM</b>		ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	1.0	0.010	0.052	1
08357	Acenaphthylene	208-96-8	1.2	0.010	0.052	1
08357	Anthracene	120-12-7	0.99	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	0.99	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	0.69	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	0.90	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	0.68	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	0.82	0.010	0.052	1
08357	Chrysene	218-01-9	0.77	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	0.67	0.010	0.052	1
08357	Fluoranthene	206-44-0	1.0	0.010	0.052	1
08357	Fluorene	86-73-7	1.0	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.70	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	1.1	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	1.1	0.010	0.052	1
08357	Naphthalene	91-20-3	1.1	0.031	0.052	1
08357	Phenanthrene	85-01-8	1.1	0.031	0.052	1
08357	Pyrene	129-00-0	1.0	0.010	0.052	1
<b>Metals</b>	<b>SM 2340 B-1997</b>		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	88.2	0.064	0.20	1
	<b>SW-846 6010B</b>		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.154	0.0068	0.0200	1
07046	Barium	7440-39-3	2.13	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0513	0.00036	0.0050	1
01750	Calcium	7440-70-2	20.1	0.0640	0.200	1

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



Lancaster Laboratories  
Environmental

# Analysis Report

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

REVISED

Sample Description: WS-008 (Surface) 061213MS Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091218  
LL Group # 1396775  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 06/12/2013 08:30 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416

Reported: 07/05/2013 08:33

Houston TX 77210-4416

12008 SDG#: PEI19-05MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals</b>						
07051	Chromium	7440-47-3	0.207	0.0011	0.0150	1
07055	Lead	7439-92-1	0.156	0.0051	0.0150	1
01757	Magnesium	7439-95-4	9.23	0.0606	0.100	1
07061	Nickel	7440-02-0	0.522	0.0011	0.0100	1
07036	Selenium	7782-49-2	0.151	0.0075	0.0200	1
07066	Silver	7440-22-4	0.0566	0.0012	0.0050	1
07071	Vanadium	7440-62-2	0.521	0.0013	0.0050	1
SW-846 7470A						
00259	Mercury	7439-97-6	0.00098	0.000070	0.000020	1

## General Sample Comments

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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G131651AA	06/14/2013 14:19	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G131651AA	06/14/2013 14:19	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13164184K026	06/20/2013 13:04	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13164184K026	06/14/2013 09:00	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO <sub>3</sub>	SM 2340 B-1997	1	131686256010	06/17/2013 07:45	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	131641848001	06/14/2013 22:45	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	131641848001	06/14/2013 13:28	Joanne M Gates	1
07049	Cadmium	SW-846 6010B	1	131641848001	06/14/2013 22:45	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	131641848001	06/14/2013 13:28	Joanne M Gates	1
07051	Chromium	SW-846 6010B	1	131641848001	06/14/2013 13:28	Joanne M Gates	1
07055	Lead	SW-846 6010B	1	131641848001	06/14/2013 13:28	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	131641848001	06/17/2013 00:16	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	131641848001	06/14/2013 13:28	Joanne M Gates	1
07036	Selenium	SW-846 6010B	1	131641848001	06/14/2013 13:28	Joanne M Gates	1
07066	Silver	SW-846 6010B	1	131641848001	06/14/2013 13:28	Joanne M Gates	1
07071	Vanadium	SW-846 6010B	1	131641848001	06/14/2013 13:28	Joanne M Gates	1
00259	Mercury	SW-846 7470A	1	131645713005	06/15/2013 06:39	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131641848001	06/13/2013 23:50	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131645713005	06/14/2013 15:30	Nelli S Markaryan	1

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

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

REVISED

**Sample Description:** WS-008 (Surface) 061213MSD Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091219  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 08:30 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12008 SDG#: PEI19-05MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	55	3.0	5.0	1
02898	Allyl Chloride	107-05-1	7.6	0.1	0.5	1
02898	Benzene	71-43-2	5.8	0.1	0.5	1
02898	Bromobenzene	108-86-1	5.6	0.1	0.5	1
02898	Bromochloromethane	74-97-5	5.6	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	5.5	0.1	0.5	1
02898	Bromoform	75-25-2	5.5	0.1	0.5	1
02898	Bromomethane	74-83-9	5.1	0.1	0.5	1
02898	2-Butanone	78-93-3	52	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	6.4	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	6.3	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	6.2	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	6.5	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.7	0.1	0.5	1
02898	Chloroethane	75-00-3	5.4	0.1	0.5	1
02898	Chloroform	67-66-3	6.1	0.1	0.5	1
02898	Chloromethane	74-87-3	5.3	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	6.0	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	6.1	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	5.9	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	5.6	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	5.0	0.1	0.5	1
02898	Dibromomethane	74-95-3	5.2	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.6	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.8	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.7	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	4.6	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	6.2	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	5.2	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	6.5	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	5.8	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	6.2	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	6.3	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.9	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	5.2	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	6.0	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	6.2	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	5.5	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	5.1	0.1	0.5	1
02898	Ethyl ether	60-29-7	5.2	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.9	0.1	0.5	1
02898	Freon 113	76-13-1	6.1	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	5.7	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	5.8	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	6.2	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	5.2	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	24	1.0	5.0	1
02898	Methylene Chloride	75-09-2	5.9	0.2	0.5	1

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

**Sample Description:** WS-008 (Surface) 061213MSD Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091219  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 08:30 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12008 SDG#: PEI19-05MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>	<b>SW-846 8260B 25mL purge</b>		ug/l	ug/l	ug/l	
02898	n-Propylbenzene	103-65-1	6.4	0.1	0.5	1
02898	Styrene	100-42-5	5.7	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	5.8	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	5.5	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	5.5	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	35	2.0	5.0	1
02898	Toluene	108-88-3	6.0	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	4.8	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	5.1	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	6.1	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	5.2	0.1	0.5	1
02898	Trichloroethene	79-01-6	6.0	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	5.5	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	5.3	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	6.1	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	6.2	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	5.5	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	18	0.1	0.5	1
<b>GC/MS Semivolatiles</b>	<b>SW-846 8270C SIM</b>		ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	1.0	0.010	0.051	1
08357	Acenaphthylene	208-96-8	1.2	0.010	0.051	1
08357	Anthracene	120-12-7	1.0	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	1.0	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.72	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.91	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.69	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.86	0.010	0.051	1
08357	Chrysene	218-01-9	0.77	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	0.68	0.010	0.051	1
08357	Fluoranthene	206-44-0	1.1	0.010	0.051	1
08357	Fluorene	86-73-7	1.1	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.72	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	1.1	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	1.1	0.010	0.051	1
08357	Naphthalene	91-20-3	1.1	0.031	0.051	1
08357	Phenanthrene	85-01-8	1.1	0.031	0.051	1
08357	Pyrene	129-00-0	1.1	0.010	0.051	1
<b>Metals</b>	<b>SM 2340 B-1997</b>		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO <sub>3</sub>	471-34-1	88.0	0.064	0.20	1
	<b>SW-846 6010B</b>		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.157	0.0068	0.0200	1
07046	Barium	7440-39-3	2.12	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0521	0.00036	0.0050	1
01750	Calcium	7440-70-2	20.0	0.0640	0.200	1

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



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

REVISED

**Sample Description:** WS-008 (Surface) 061213MSD Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091219  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 08:30 by TM

ExxonMobil

Mobil Pipeline Company  
PO Box 4416

Submitted: 06/13/2013 09:15

Houston TX 77210-4416

Reported: 07/05/2013 08:33

12008 SDG#: PEI19-05MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07051	Chromium	7440-47-3	0.210	0.0011	0.0150	1
07055	Lead	7439-92-1	0.156	0.0051	0.0150	1
01757	Magnesium	7439-95-4	9.26	0.0606	0.100	1
07061	Nickel	7440-02-0	0.524	0.0011	0.0100	1
07036	Selenium	7782-49-2	0.152	0.0075	0.0200	1
07066	Silver	7440-22-4	0.0564	0.0012	0.0050	1
07071	Vanadium	7440-62-2	0.522	0.0013	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	0.00097	0.000070	0.000020	1

#### General Sample Comments

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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G131651AA	06/14/2013 14:41	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G131651AA	06/14/2013 14:41	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13164184K026	06/20/2013 13:34	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13164184K026	06/14/2013 09:00	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	131686256010	06/17/2013 07:45	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	131641848001	06/14/2013 22:49	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	131641848001	06/14/2013 13:32	Joanne M Gates	1
07049	Cadmium	SW-846 6010B	1	131641848001	06/14/2013 22:49	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	131641848001	06/14/2013 13:32	Joanne M Gates	1
07051	Chromium	SW-846 6010B	1	131641848001	06/14/2013 13:32	Joanne M Gates	1
07055	Lead	SW-846 6010B	1	131641848001	06/14/2013 13:32	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	131641848001	06/17/2013 00:20	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	131641848001	06/14/2013 13:32	Joanne M Gates	1
07036	Selenium	SW-846 6010B	1	131641848001	06/14/2013 13:32	Joanne M Gates	1
07066	Silver	SW-846 6010B	1	131641848001	06/14/2013 13:32	Joanne M Gates	1
07071	Vanadium	SW-846 6010B	1	131641848001	06/14/2013 13:32	Joanne M Gates	1
00259	Mercury	SW-846 7470A	1	131645713005	06/15/2013 06:41	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131641848001	06/13/2013 23:50	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131645713005	06/14/2013 15:30	Nelli S Markaryan	1

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



**Sample Description:** WS-008 (Surface) 061213DUP Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091220  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 08:30 by TM

ExxonMobil

Mobil Pipeline Company  
PO Box 4416

Submitted: 06/13/2013 09:15

Houston TX 77210-4416

Reported: 07/05/2013 08:33

12008 SDG#: PEI19-05DUP

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals</b>	<b>SM 2340 B-1997</b>		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO <sub>3</sub>	471-34-1	69.4	0.064	0.20	1
	<b>SW-846 6010B</b>		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0504	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00036	0.0050	1
01750	Calcium	7440-70-2	16.0	0.0640	0.200	1
07051	Chromium	7440-47-3	0.0012 J	0.0011	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0051	0.0150	1
01757	Magnesium	7439-95-4	7.17	0.0606	0.100	1
07061	Nickel	7440-02-0	0.0039 J	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	0.0014 J	0.0013	0.0050	1
	<b>SW-846 7470A</b>		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000070	0.00020	1

#### General Sample Comments

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
06256	Total Hardness as CaCO <sub>3</sub>	SM 2340 B-1997	1	131686256010	06/17/2013 07:45	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	131641848001	06/14/2013 22:42	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	131641848001	06/14/2013 13:24	Joanne M Gates	1
07049	Cadmium	SW-846 6010B	1	131641848001	06/14/2013 22:42	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	131641848001	06/14/2013 13:24	Joanne M Gates	1
07051	Chromium	SW-846 6010B	1	131641848001	06/14/2013 13:24	Joanne M Gates	1
07055	Lead	SW-846 6010B	1	131641848001	06/14/2013 13:24	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	131641848001	06/17/2013 00:12	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	131641848001	06/14/2013 13:24	Joanne M Gates	1
07036	Selenium	SW-846 6010B	1	131641848001	06/14/2013 13:24	Joanne M Gates	1
07066	Silver	SW-846 6010B	1	131641848001	06/14/2013 13:24	Joanne M Gates	1
07071	Vanadium	SW-846 6010B	1	131641848001	06/14/2013 13:24	Joanne M Gates	1
00259	Mercury	SW-846 7470A	1	131645713005	06/15/2013 06:37	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131641848001	06/13/2013 23:50	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131645713005	06/14/2013 15:30	Nelli S Markaryan	1

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

**Sample Description:** WS-001 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091221  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 08:50 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416

Reported: 07/05/2013 08:33

Houston TX 77210-4416

12011 SDG#: PEI19-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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

**Sample Description:** WS-001 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091221  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 08:50 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12011 SDG#: PEI19-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>	<b>SW-846 8260B 25mL purge</b>		ug/l	ug/l	ug/l	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
<b>GC/MS Semivolatiles</b>	<b>SW-846 8270C SIM</b>		ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
<b>Metals</b>	<b>SM 2340 B-1997</b>		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO <sub>3</sub>	471-34-1	19.3	0.064	0.20	1
	<b>SW-846 6010B</b>		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0192	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00036	0.0050	1
01750	Calcium	7440-70-2	4.25	0.0640	0.200	1

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



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

REVISED

**Sample Description:** WS-001 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091221  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 08:50 by TM

ExxonMobil

Mobil Pipeline Company  
PO Box 4416

Submitted: 06/13/2013 09:15

Houston TX 77210-4416

Reported: 07/05/2013 08:33

12011 SDG#: PEI19-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07051	Chromium	7440-47-3	N.D.	0.0011	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0051	0.0150	1
01757	Magnesium	7439-95-4	2.11	0.0606	0.100	1
07061	Nickel	7440-02-0	0.0012 J	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0013	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.	0.000070	0.00020	1

#### General Sample Comments

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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G131651AA	06/14/2013 17:12	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G131651AA	06/14/2013 17:12	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13164184K026	06/20/2013 16:01	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13164184K026	06/14/2013 09:00	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	131686256010	06/17/2013 07:45	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	131641848001	06/14/2013 23:24	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	131641848001	06/14/2013 14:06	Joanne M Gates	1
07049	Cadmium	SW-846 6010B	1	131641848001	06/14/2013 23:24	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	131641848001	06/14/2013 14:06	Joanne M Gates	1
07051	Chromium	SW-846 6010B	1	131641848001	06/14/2013 14:06	Joanne M Gates	1
07055	Lead	SW-846 6010B	1	131641848001	06/14/2013 14:06	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	131641848001	06/17/2013 00:54	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	131641848001	06/14/2013 14:06	Joanne M Gates	1
07036	Selenium	SW-846 6010B	1	131641848001	06/14/2013 14:06	Joanne M Gates	1
07066	Silver	SW-846 6010B	1	131641848001	06/14/2013 14:06	Joanne M Gates	1
07071	Vanadium	SW-846 6010B	1	131641848001	06/14/2013 14:06	Joanne M Gates	1
00259	Mercury	SW-846 7470A	1	131645713005	06/15/2013 06:47	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131641848001	06/13/2013 23:50	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131645713005	06/14/2013 15:30	Nelli S Markaryan	1

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

**Sample Description:** WS-001(0.5-1.0)061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091222  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 09:00 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12012 SDG#: PEI19-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l		
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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

**Sample Description:** WS-001(0.5-1.0)061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091222  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 09:00 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12012 SDG#: PEI19-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>	<b>SW-846 8260B 25mL purge</b>		ug/l	ug/l	ug/l	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
<b>GC/MS Semivolatiles</b>	<b>SW-846 8270C SIM</b>		ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.050	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.050	1
08357	Anthracene	120-12-7	N.D.	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.050	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.050	1
08357	Chrysene	218-01-9	N.D.	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.050	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.050	1
08357	Fluorene	86-73-7	N.D.	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.050	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.050	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.050	1
08357	Pyrene	129-00-0	N.D.	0.010	0.050	1
<b>Metals</b>	<b>SM 2340 B-1997</b>		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO <sub>3</sub>	471-34-1	20.5	0.064	0.20	1
	<b>SW-846 6010B</b>		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0243	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00036	0.0050	1
01750	Calcium	7440-70-2	4.52	0.0640	0.200	1

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



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

REVISED

**Sample Description:** WS-001(0.5-1.0)061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091222  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 09:00 by TM

ExxonMobil

Mobil Pipeline Company  
PO Box 4416

Submitted: 06/13/2013 09:15

Houston TX 77210-4416

Reported: 07/05/2013 08:33

12012 SDG#: PEI19-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07051	Chromium	7440-47-3	N.D.	0.0011	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0051	0.0150	1
01757	Magnesium	7439-95-4	2.23	0.0606	0.100	1
07061	Nickel	7440-02-0	0.0017 J	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0013	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	0.00011 J	0.000070	0.00020	1

#### General Sample Comments

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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G131651AA	06/14/2013 17:33	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G131651AA	06/14/2013 17:33	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13164184K026	06/20/2013 16:31	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13164184K026	06/14/2013 09:00	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	131686256010	06/17/2013 07:45	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	131641848001	06/14/2013 23:28	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	131641848001	06/14/2013 14:10	Joanne M Gates	1
07049	Cadmium	SW-846 6010B	1	131641848001	06/14/2013 23:28	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	131641848001	06/14/2013 14:10	Joanne M Gates	1
07051	Chromium	SW-846 6010B	1	131641848001	06/14/2013 14:10	Joanne M Gates	1
07055	Lead	SW-846 6010B	1	131641848001	06/14/2013 14:10	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	131641848001	06/17/2013 00:58	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	131641848001	06/14/2013 14:10	Joanne M Gates	1
07036	Selenium	SW-846 6010B	1	131641848001	06/14/2013 14:10	Joanne M Gates	1
07066	Silver	SW-846 6010B	1	131641848001	06/14/2013 14:10	Joanne M Gates	1
07071	Vanadium	SW-846 6010B	1	131641848001	06/14/2013 14:10	Joanne M Gates	1
00259	Mercury	SW-846 7470A	1	131645713005	06/15/2013 06:49	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131641848001	06/13/2013 23:50	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131645713005	06/14/2013 15:30	Nelli S Markaryan	1

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

**Sample Description:** WS-004 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091223  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 09:10 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416

Reported: 07/05/2013 08:33

Houston TX 77210-4416

12041 SDG#: PEI19-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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

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

REVISED

**Sample Description:** WS-004 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091223  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 09:10 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12041 SDG#: PEI19-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>	<b>SW-846 8260B 25mL purge</b>		ug/l	ug/l	ug/l	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	0.3 J	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
<b>GC/MS Semivolatiles</b>	<b>SW-846 8270C SIM</b>		ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.050	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.050	1
08357	Anthracene	120-12-7	N.D.	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.050	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.050	1
08357	Chrysene	218-01-9	N.D.	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.050	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.050	1
08357	Fluorene	86-73-7	N.D.	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	0.013 J	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.050	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.050	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.050	1
08357	Pyrene	129-00-0	N.D.	0.010	0.050	1
<b>Metals</b>	<b>SM 2340 B-1997</b>		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	17.1	0.064	0.20	1
	<b>SW-846 6010B</b>		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0326	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00036	0.0050	1
01750	Calcium	7440-70-2	3.92	0.0640	0.200	1

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



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

REVISED

**Sample Description:** WS-004 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091223  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 09:10 by TM

ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

Submitted: 06/13/2013 09:15

Reported: 07/05/2013 08:33

12041 SDG#: PEI19-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07051	Chromium	7440-47-3	0.0017 J	0.0011	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0051	0.0150	1
01757	Magnesium	7439-95-4	1.79	0.0606	0.100	1
07061	Nickel	7440-02-0	0.0024 J	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	0.0029 J	0.0013	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.	0.000070	0.00020	1

#### General Sample Comments

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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G131651AA	06/14/2013 17:55	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G131651AA	06/14/2013 17:55	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13164WAK026	06/20/2013 17:00	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13164WAK026	06/14/2013 09:00	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	131686256010	06/17/2013 07:45	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	131641848001	06/14/2013 23:31	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	131641848001	06/14/2013 14:14	Joanne M Gates	1
07049	Cadmium	SW-846 6010B	1	131641848001	06/14/2013 23:31	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	131641848001	06/14/2013 14:14	Joanne M Gates	1
07051	Chromium	SW-846 6010B	1	131641848001	06/14/2013 14:14	Joanne M Gates	1
07055	Lead	SW-846 6010B	1	131641848001	06/14/2013 14:14	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	131641848001	06/17/2013 01:02	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	131641848001	06/14/2013 14:14	Joanne M Gates	1
07036	Selenium	SW-846 6010B	1	131641848001	06/14/2013 14:14	Joanne M Gates	1
07066	Silver	SW-846 6010B	1	131641848001	06/14/2013 14:14	Joanne M Gates	1
07071	Vanadium	SW-846 6010B	1	131641848001	06/14/2013 14:14	Joanne M Gates	1
00259	Mercury	SW-846 7470A	1	131645713005	06/15/2013 06:51	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131641848001	06/13/2013 23:50	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131645713005	06/14/2013 15:30	Nelli S Markaryan	1

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

**Sample Description:** WS-004 (0.5-1.0) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091224  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 09:20 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416

Reported: 07/05/2013 08:33

Houston TX 77210-4416

12042 SDG#: PEI19-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l		
02898	Acetone	67-64-1	3.9 J	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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



**Sample Description:** WS-004 (0.5-1.0) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091224  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 09:20 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12042 SDG#: PEI19-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>	<b>SW-846 8260B 25mL purge</b>		ug/l	ug/l	ug/l	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	2.1	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
<b>GC/MS Semivolatiles</b>	<b>SW-846 8270C SIM</b>		ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.011 J	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	0.011 J	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	0.014 J	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	0.011 J	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
<b>Metals</b>	<b>SM 2340 B-1997</b>		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO <sub>3</sub>	471-34-1	21.8	0.064	0.20	1
	<b>SW-846 6010B</b>		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0082 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0809	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.00061 J	0.00036	0.0050	1
01750	Calcium	7440-70-2	4.92	0.0640	0.200	1

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



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

REVISED

**Sample Description:** WS-004 (0.5-1.0) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091224  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 09:20 by TM

ExxonMobil

Mobil Pipeline Company  
PO Box 4416

Submitted: 06/13/2013 09:15

Houston TX 77210-4416

Reported: 07/05/2013 08:33

12042 SDG#: PEI19-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07051	Chromium	7440-47-3	0.0097 J	0.0011	0.0150	1
07055	Lead	7439-92-1	0.0462	0.0051	0.0150	1
01757	Magnesium	7439-95-4	2.32	0.0606	0.100	1
07061	Nickel	7440-02-0	0.0088 J	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	0.0123	0.0013	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.	0.000070	0.00020	1

#### General Sample Comments

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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G131651AA	06/14/2013 18:17	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G131651AA	06/14/2013 18:17	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13164WAK026	06/20/2013 17:30	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13164WAK026	06/14/2013 09:00	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	131686256010	06/17/2013 07:45	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	131641848001	06/14/2013 23:35	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	131641848001	06/14/2013 14:17	Joanne M Gates	1
07049	Cadmium	SW-846 6010B	1	131641848001	06/14/2013 23:35	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	131641848001	06/14/2013 14:17	Joanne M Gates	1
07051	Chromium	SW-846 6010B	1	131641848001	06/14/2013 14:17	Joanne M Gates	1
07055	Lead	SW-846 6010B	1	131641848001	06/14/2013 14:17	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	131641848001	06/17/2013 01:05	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	131641848001	06/14/2013 14:17	Joanne M Gates	1
07036	Selenium	SW-846 6010B	1	131641848001	06/14/2013 14:17	Joanne M Gates	1
07066	Silver	SW-846 6010B	1	131641848001	06/14/2013 14:17	Joanne M Gates	1
07071	Vanadium	SW-846 6010B	1	131641848001	06/14/2013 14:17	Joanne M Gates	1
00259	Mercury	SW-846 7470A	1	131645713005	06/15/2013 06:53	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131641848001	06/13/2013 23:50	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131645713005	06/14/2013 15:30	Nelli S Markaryan	1

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

**Sample Description:** WS-007 (Surface) 061213 Grab Surface Water  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # WW 7091225  
 LL Group # 1396775  
 Account # 14739

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

Collected: 06/12/2013 09:40 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
 PO Box 4416  
 Houston TX 77210-4416

Reported: 07/05/2013 08:33

12071 SDG#: PEI19-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l		
02898	Acetone	67-64-1	3.0	J	3.0	5.0
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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



**Sample Description:** WS-007 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091225  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 09:40 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12071 SDG#: PEI19-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>	<b>SW-846 8260B 25mL purge</b>		ug/l	ug/l	ug/l	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	0.5 J	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
<b>GC/MS Semivolatiles</b>	<b>SW-846 8270C SIM</b>		ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	0.016 J	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	0.018 J	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	0.015 J	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	0.012 J	0.010	0.051	1
<b>Metals</b>	<b>SM 2340 B-1997</b>		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO <sub>3</sub>	471-34-1	17.8	0.064	0.20	1
	<b>SW-846 6010B</b>		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0413	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00036	0.0050	1
01750	Calcium	7440-70-2	4.01	0.0640	0.200	1

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



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

REVISED

**Sample Description:** WS-007 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091225  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 09:40 by TM

ExxonMobil

Mobil Pipeline Company  
PO Box 4416

Submitted: 06/13/2013 09:15

Houston TX 77210-4416

Reported: 07/05/2013 08:33

12071 SDG#: PEI19-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07051	Chromium	7440-47-3	0.0025 J	0.0011	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0051	0.0150	1
01757	Magnesium	7439-95-4	1.89	0.0606	0.100	1
07061	Nickel	7440-02-0	0.0029 J	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	0.0041 J	0.0013	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.	0.000070	0.00020	1

#### General Sample Comments

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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G131651AA	06/14/2013 18:38	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G131651AA	06/14/2013 18:38	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13164184K026	06/21/2013 03:31	Holly Berry	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13164184K026	06/14/2013 09:00	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	131686256010	06/17/2013 07:45	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	131641848001	06/14/2013 23:39	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	131641848001	06/14/2013 14:21	Joanne M Gates	1
07049	Cadmium	SW-846 6010B	1	131641848001	06/14/2013 23:39	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	131641848001	06/14/2013 14:21	Joanne M Gates	1
07051	Chromium	SW-846 6010B	1	131641848001	06/14/2013 14:21	Joanne M Gates	1
07055	Lead	SW-846 6010B	1	131641848001	06/14/2013 14:21	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	131641848001	06/17/2013 01:09	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	131641848001	06/14/2013 14:21	Joanne M Gates	1
07036	Selenium	SW-846 6010B	1	131641848001	06/14/2013 14:21	Joanne M Gates	1
07066	Silver	SW-846 6010B	1	131641848001	06/14/2013 14:21	Joanne M Gates	1
07071	Vanadium	SW-846 6010B	1	131641848001	06/14/2013 14:21	Joanne M Gates	1
00259	Mercury	SW-846 7470A	1	131645713005	06/15/2013 06:55	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131641848001	06/13/2013 23:50	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131645713005	06/14/2013 15:30	Nelli S Markaryan	1

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

**Sample Description:** WS-007 (0.5-1.0) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091226  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 09:50 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416

Reported: 07/05/2013 08:33

Houston TX 77210-4416

12072 SDG#: PEI19-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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

**Sample Description:** WS-007 (0.5-1.0) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091226  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 09:50 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12072 SDG#: PEI19-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>	<b>SW-846 8260B 25mL purge</b>		ug/l	ug/l	ug/l	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	1.8	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
<b>GC/MS Semivolatiles</b>	<b>SW-846 8270C SIM</b>		ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	0.020 J	0.010	0.050	1
08357	Acenaphthylene	208-96-8	0.026 J	0.010	0.050	1
08357	Anthracene	120-12-7	0.043 J	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	0.12	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	0.12	0.010	0.050	1
08357	Benzo(b)fluoranthene	205-99-2	0.40	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	0.11	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	0.13	0.010	0.050	1
08357	Chrysene	218-01-9	0.36	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	0.028 J	0.010	0.050	1
08357	Fluoranthene	206-44-0	0.59	0.010	0.050	1
08357	Fluorene	86-73-7	0.021 J	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.11	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	0.018 J	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	0.015 J	0.010	0.050	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.050	1
08357	Phenanthrene	85-01-8	0.13	0.030	0.050	1
08357	Pyrene	129-00-0	0.54	0.010	0.050	1
<b>Metals</b>	<b>SM 2340 B-1997</b>		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO <sub>3</sub>	471-34-1	18.4	0.064	0.20	1
	<b>SW-846 6010B</b>		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0080 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0538	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00036	0.0050	1
01750	Calcium	7440-70-2	4.03	0.0640	0.200	1

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



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

REVISED

**Sample Description:** WS-007 (0.5-1.0) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091226  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 09:50 by TM

ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

Submitted: 06/13/2013 09:15

Reported: 07/05/2013 08:33

12072 SDG#: PEI19-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07051	Chromium	7440-47-3	0.0041 J	0.0011	0.0150	1
07055	Lead	7439-92-1	0.0070 J	0.0051	0.0150	1
01757	Magnesium	7439-95-4	2.03	0.0606	0.100	1
07061	Nickel	7440-02-0	0.0048 J	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	0.0066	0.0013	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.	0.000070	0.00020	1

#### General Sample Comments

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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G131651AA	06/14/2013 19:00	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G131651AA	06/14/2013 19:00	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13164184K026	06/21/2013 04:00	Holly Berry	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13164184K026	06/14/2013 09:00	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	131686256010	06/17/2013 07:45	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	131641848001	06/14/2013 23:43	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	131641848001	06/14/2013 14:25	Joanne M Gates	1
07049	Cadmium	SW-846 6010B	1	131641848001	06/14/2013 23:43	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	131641848001	06/14/2013 14:25	Joanne M Gates	1
07051	Chromium	SW-846 6010B	1	131641848001	06/14/2013 14:25	Joanne M Gates	1
07055	Lead	SW-846 6010B	1	131641848001	06/14/2013 14:25	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	131641848001	06/17/2013 01:13	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	131641848001	06/14/2013 14:25	Joanne M Gates	1
07036	Selenium	SW-846 6010B	1	131641848001	06/14/2013 14:25	Joanne M Gates	1
07066	Silver	SW-846 6010B	1	131641848001	06/14/2013 14:25	Joanne M Gates	1
07071	Vanadium	SW-846 6010B	1	131641848001	06/14/2013 14:25	Joanne M Gates	1
00259	Mercury	SW-846 7470A	1	131645713005	06/15/2013 06:57	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131641848001	06/13/2013 23:50	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131645713005	06/14/2013 15:30	Nelli S Markaryan	1

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

**Sample Description:** WS-006 (Surface) 061213 Grab Surface Water  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # WW 7091227  
 LL Group # 1396775  
 Account # 14739

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

Collected: 06/12/2013 10:00 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
 PO Box 4416  
 Houston TX 77210-4416

Reported: 07/05/2013 08:33

12061 SDG#: PEI19-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l		
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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

**Sample Description:** WS-006 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091227  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 10:00 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12061 SDG#: PEI19-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>	<b>SW-846 8260B 25mL purge</b>		ug/l	ug/l	ug/l	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
<b>GC/MS Semivolatiles</b>	<b>SW-846 8270C SIM</b>		ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
<b>Metals</b>	<b>SM 2340 B-1997</b>		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO <sub>3</sub>	471-34-1	19.7	0.064	0.20	1
	<b>SW-846 6010B</b>		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0219	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00036	0.0050	1
01750	Calcium	7440-70-2	4.38	0.0640	0.200	1

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



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

REVISED

**Sample Description:** WS-006 (Surface) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091227  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 10:00 by TM

ExxonMobil

Mobil Pipeline Company

PO Box 4416

Houston TX 77210-4416

Submitted: 06/13/2013 09:15

Reported: 07/05/2013 08:33

12061 SDG#: PEI19-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07051	Chromium	7440-47-3	N.D.	0.0011	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0051	0.0150	1
01757	Magnesium	7439-95-4	2.12	0.0606	0.100	1
07061	Nickel	7440-02-0	0.0013 J	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0013	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	0.000094 J	0.000070	0.000020	1

#### General Sample Comments

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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G131651AA	06/14/2013 19:21	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G131651AA	06/14/2013 19:21	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13164184K026	06/21/2013 04:30	Holly Berry	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13164184K026	06/14/2013 09:00	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	131686256010	06/17/2013 07:45	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	131641848001	06/14/2013 23:47	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	131641848001	06/14/2013 14:29	Joanne M Gates	1
07049	Cadmium	SW-846 6010B	1	131641848001	06/14/2013 23:47	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	131641848001	06/14/2013 14:29	Joanne M Gates	1
07051	Chromium	SW-846 6010B	1	131641848001	06/14/2013 14:29	Joanne M Gates	1
07055	Lead	SW-846 6010B	1	131641848001	06/14/2013 14:29	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	131641848001	06/17/2013 01:24	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	131641848001	06/14/2013 14:29	Joanne M Gates	1
07036	Selenium	SW-846 6010B	1	131641848001	06/14/2013 14:29	Joanne M Gates	1
07066	Silver	SW-846 6010B	1	131641848001	06/14/2013 14:29	Joanne M Gates	1
07071	Vanadium	SW-846 6010B	1	131641848001	06/14/2013 14:29	Joanne M Gates	1
00259	Mercury	SW-846 7470A	1	131645713005	06/15/2013 06:59	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131641848001	06/13/2013 23:50	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131645713005	06/14/2013 15:30	Nelli S Markaryan	1

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

**Sample Description:** WS-006 (0.5-1.0) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091228  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 10:15 by TM

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12062 SDG#: PEI19-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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

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

REVISED

**Sample Description:** WS-006 (0.5-1.0) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091228  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 10:15 by TM

ExxonMobil

Mobil Pipeline Company  
PO Box 4416

Submitted: 06/13/2013 09:15  
Reported: 07/05/2013 08:33

Houston TX 77210-4416

12062 SDG#: PEI19-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>	<b>SW-846 8260B 25mL purge</b>		ug/l	ug/l	ug/l	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
<b>GC/MS Semivolatiles</b>	<b>SW-846 8270C SIM</b>		ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.050	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.050	1
08357	Anthracene	120-12-7	N.D.	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.050	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.050	1
08357	Chrysene	218-01-9	N.D.	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.050	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.050	1
08357	Fluorene	86-73-7	N.D.	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.050	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.050	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.050	1
08357	Pyrene	129-00-0	N.D.	0.010	0.050	1
<b>Metals</b>	<b>SM 2340 B-1997</b>		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO <sub>3</sub>	471-34-1	20.4	0.064	0.20	1
	<b>SW-846 6010B</b>		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0237	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00036	0.0050	1
01750	Calcium	7440-70-2	4.54	0.0640	0.200	1

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



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

REVISED

**Sample Description:** WS-006 (0.5-1.0) 061213 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091228  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013 10:15 by TM

ExxonMobil

Mobil Pipeline Company  
PO Box 4416

Submitted: 06/13/2013 09:15

Houston TX 77210-4416

Reported: 07/05/2013 08:33

12062 SDG#: PEI19-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>Metals</b>	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07051	Chromium	7440-47-3	N.D.	0.0011	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0051	0.0150	1
01757	Magnesium	7439-95-4	2.20	0.0606	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0013	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	0.00025	0.000070	0.00020	1

#### General Sample Comments

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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G131651AA	06/14/2013 19:43	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G131651AA	06/14/2013 19:43	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13164184K026	06/21/2013 04:59	Holly Berry	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13164184K026	06/14/2013 09:00	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	131686256010	06/17/2013 07:45	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	131641848001	06/14/2013 23:58	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	131641848001	06/14/2013 14:40	Joanne M Gates	1
07049	Cadmium	SW-846 6010B	1	131641848001	06/14/2013 23:58	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	131641848001	06/14/2013 14:40	Joanne M Gates	1
07051	Chromium	SW-846 6010B	1	131641848001	06/14/2013 14:40	Joanne M Gates	1
07055	Lead	SW-846 6010B	1	131641848001	06/14/2013 14:40	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	131641848001	06/17/2013 01:29	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	131641848001	06/14/2013 14:40	Joanne M Gates	1
07036	Selenium	SW-846 6010B	1	131641848001	06/14/2013 14:40	Joanne M Gates	1
07066	Silver	SW-846 6010B	1	131641848001	06/14/2013 14:40	Joanne M Gates	1
07071	Vanadium	SW-846 6010B	1	131641848001	06/14/2013 14:40	Joanne M Gates	1
00259	Mercury	SW-846 7470A	1	131645713005	06/15/2013 07:01	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131641848001	06/13/2013 23:50	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131645713005	06/14/2013 15:30	Nelli S Markaryan	1

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

**Sample Description:** WS-TB-71-061213 Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091229  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12T71 SDG#: PEI19-14TB\*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l		
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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



**Sample Description:** WS-TB-71-061213 Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7091229  
LL Group # 1396775  
Account # 14739

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

Collected: 06/12/2013

ExxonMobil

Submitted: 06/13/2013 09:15

Mobil Pipeline Company  
PO Box 4416  
Houston TX 77210-4416

Reported: 07/05/2013 08:33

12T71 SDG#: PEI19-14TB\*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l	ug/l	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

#### General Sample Comments

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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G131651AA	06/14/2013 13:36	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G131651AA	06/14/2013 13:36	Jason M Long	1

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

## Quality Control Summary

Client Name: ExxonMobil  
Reported: 07/05/13 at 08:33 AM

Group Number: 1396775

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: G131651AA									
Acetone	N.D.	3.0	5.0	ug/l	124		73-135		
Allyl Chloride	N.D.	0.1	0.5	ug/l	138*		61-130		
Benzene	N.D.	0.1	0.5	ug/l	102		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	107		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	104		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	103		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	108		63-132		
Bromomethane	N.D.	0.1	0.5	ug/l	93		38-146		
2-Butanone	N.D.	1.0	5.0	ug/l	133*		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	114		80-120		
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	112		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	108		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	111		74-133		
Chlorobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	98		67-124		
Chloroform	N.D.	0.1	0.5	ug/l	106		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	94		55-135		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	111		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	113		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	112		57-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	105		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	96		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	96		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	106		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	111		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	106		80-112		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	80		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	110		80-120		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	100		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	109		80-123		
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	106		80-120		
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	109		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	111		63-149		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	109		80-120		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	101		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	104		75-122		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	106		80-121		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	104		74-120		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	97		73-126		
Ethyl ether	N.D.	0.1	0.5	ug/l	100		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	105		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	102		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	102		61-125		

\*- Outside of specification

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

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

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

## Quality Control Summary

Client Name: ExxonMobil

Reported: 07/05/13 at 08:33 AM

Group Number: 1396775

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Isopropylbenzene	N.D.	0.1	0.5	ug/l	103		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	110		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	101		80-125		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	95		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	109		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	115		80-120		
Styrene	N.D.	0.1	0.5	ug/l	104		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	107		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	109		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	97		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	131		65-131		
Toluene	N.D.	0.1	0.5	ug/l	106		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	90		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	97		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	104		79-127		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	101		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	105		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	94		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	101		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	112		80-120		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	113		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	95		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	105		80-120		

Batch number: 13164WAK026

Acenaphthene	N.D.	0.010	0.050	ug/l	98	65-124
Acenaphthylene	N.D.	0.010	0.050	ug/l	118*	72-113
Anthracene	N.D.	0.010	0.050	ug/l	105	70-117
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	93	75-115
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	95	72-120
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	107	74-130
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	79	63-121
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	98	74-118
Chrysene	N.D.	0.010	0.050	ug/l	95	75-112
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	69	66-122
Fluoranthene	N.D.	0.010	0.050	ug/l	103	73-116
Fluorene	N.D.	0.010	0.050	ug/l	99	74-115
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	74	66-122
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	106	72-114
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	101	74-119
Naphthalene	N.D.	0.030	0.050	ug/l	99	67-118
Phenanthrene	N.D.	0.030	0.050	ug/l	99	72-109
Pyrene	N.D.	0.010	0.050	ug/l	96	71-116

Batch number: 131641848001

Arsenic	N.D.	0.0068	0.0200	mg/l	101	90-113
Barium	N.D.	0.00033	0.0050	mg/l	105	90-110
Cadmium	N.D.	0.00036	0.0050	mg/l	104	90-112
Calcium	N.D.	0.0640	0.200	mg/l	102	90-110
Chromium	N.D.	0.0011	0.0150	mg/l	103	90-110
Lead	N.D.	0.0051	0.0150	mg/l	105	88-110
Magnesium	N.D.	0.0606	0.100	mg/l	104	90-110
Nickel	N.D.	0.0011	0.0100	mg/l	105	90-111
Selenium	N.D.	0.0075	0.0200	mg/l	101	80-120
Silver	N.D.	0.0012	0.0050	mg/l	113	80-120
Vanadium	N.D.	0.0013	0.0050	mg/l	103	90-110

\*- Outside of specification

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

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

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

**Quality Control Summary**

Client Name: ExxonMobil

Group Number: 1396775

Reported: 07/05/13 at 08:33 AM

<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: 131645713005 Mercury				Sample number(s): 7091213-7091228 N.D. 0.00007 0.00020 mg/l 0		97		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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: G131651AA			Sample number(s): 7091213-7091219, 7091221-7091229 UNSPK: 7091217					
Acetone	101	132	57-163	23 30				
Allyl Chloride	142*	152*	67-139	7 30				
Benzene	109	116	87-126	6 30				
Bromobenzene	109	112	80-123	3 30				
Bromoform	104	111	82-125	6 30				
Bromochloromethane	104	111	82-133	7 30				
Bromodichloromethane	104	111	60-138	6 30				
Bromomethane	96	103	41-145	7 30				
2-Butanone	116	138	63-146	17 30				
n-Butylbenzene	123	128	83-131	4 30				
sec-Butylbenzene	122	126	84-128	3 30				
tert-Butylbenzene	117	123	84-135	5 30				
Carbon Tetrachloride	122	131	81-148	7 30				
Chlorobenzene	109	114	78-133	5 30				
Chloroethane	104	109	70-139	5 30				
Chloroform	109	118	86-136	7 30				
Chloromethane	99	105	55-152	6 30				
2-Chlorotoluene	117	120	81-120	3 30				
4-Chlorotoluene	118	122*	82-119	4 30				
1,2-Dibromo-3-chloropropane	102	118	43-143	15 30				
Dibromochloromethane	106	112	79-125	5 30				
1,2-Dibromoethane	96	99	84-127	3 30				
Dibromomethane	97	103	83-126	7 30				
1,2-Dichlorobenzene	108	112	83-117	4 30				
1,3-Dichlorobenzene	115	116	81-118	1 30				
1,4-Dichlorobenzene	110	114	79-120	3 30				
Dichlorodifluoromethane	84	91	28-136	8 30				
1,1-Dichloroethane	114	124	88-136	8 30				
1,2-Dichloroethane	101	105	82-135	4 30				
1,1-Dichloroethene	123	130	83-150	5 30				
cis-1,2-Dichloroethene	109	116	82-129	6 30				
trans-1,2-Dichloroethene	117	123	88-127	5 30				
Dichlorofluoromethane	118	126	59-176	6 30				
1,2-Dichloropropane	111	118	91-126	6 30				
1,3-Dichloropropane	101	104	80-127	3 30				
2,2-Dichloropropane	110	120	80-134	8 30				
1,1-Dichloropropene	118	125	86-139	6 30				
cis-1,3-Dichloropropene	103	110	74-132	7 30				
trans-1,3-Dichloropropene	96	101	71-128	5 30				
Ethyl ether	95	104	67-127	9 30				

\*- Outside of specification

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

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

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

### Quality Control Summary

Client Name: ExxonMobil  
Reported: 07/05/13 at 08:33 AM

Group Number: 1396775

#### 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>BKG MAX</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Ethylbenzene	113	118	80-140	5	30			
Freon 113	114	121	87-158	6	30			
Hexachlorobutadiene	111	113	65-128	2	30			
Isopropylbenzene	111	116	81-133	5	30			
p-Isopropyltoluene	120	123	84-124	3	30			
Methyl Tertiary Butyl Ether	97	104	82-132	7	30			
4-Methyl-2-Pentanone	92	96	69-149	5	30			
Methylene Chloride	110	117	84-122	6	30			
n-Propylbenzene	124	128	79-131	3	30			
Styrene	110	114	63-151	4	30			
1,1,1,2-Tetrachloroethane	109	116	87-126	7	30			
1,1,2,2-Tetrachloroethane	107	111	75-131	4	30			
Tetrachloroethene	105	111	75-129	5	30			
Tetrahydrofuran	122	140	56-154	14	30			
Toluene	113	119	83-127	5	30			
1,2,3-Trichlorobenzene	92	96	73-125	4	30			
1,2,4-Trichlorobenzene	100	103	77-120	3	30			
1,1,1-Trichloroethane	113	122	85-140	8	30			
1,1,2-Trichloroethane	100	104	85-129	4	30			
Trichloroethene	114	121	85-131	6	30			
Trichlorofluoromethane	103	110	67-161	7	30			
1,2,3-Trichloropropane	102	106	76-120	4	30			
1,2,4-Trimethylbenzene	117	121	87-126	3	30			
1,3,5-Trimethylbenzene	120	124	89-129	4	30			
Vinyl Chloride	104	111	65-151	7	30			
Xylene (Total)	111	117	81-137	5	30			

Batch number: 13164WAK026

Sample number(s): 7091213-7091219, 7091221-7091228 UNSPK: 7091217

Acenaphthene	97	97	59-127	1	30
Acenaphthylene	116	119	33-146	2	30
Anthracene	93	96	69-119	2	30
Benzo(a)anthracene	95	98	67-124	2	30
Benzo(a)pyrene	67	70	64-123	4	30
Benzo(b)fluoranthene	87	88	61-133	1	30
Benzo(g,h,i)perylene	65	67	36-138	2	30
Benzo(k)fluoranthene	79	84	59-128	5	30
Chrysene	73	74	62-118	1	30
Dibenz(a,h)anthracene	65	67	32-141	2	30
Fluoranthene	97	99	65-123	2	30
Fluorene	99	100	69-124	0	30
Indeno(1,2,3-cd)pyrene	68	70	29-143	2	30
1-Methylnaphthalene	106	106	67-117	1	30
2-Methylnaphthalene	104	103	71-126	2	30
Naphthalene	100	100	58-131	1	30
Phenanthrene	98	100	67-117	1	30
Pyrene	99	103	59-125	3	30

Batch number: 131641848001

Sample number(s): 7091213-7091228 UNSPK: 7091217 BKG: 7091217

Arsenic	103	104	81-123	2	20	N.D.	N.D.	0 (1)	20
Barium	104	104	78-118	0	20	0.0505	0.0504	0	20
Cadmium	103	104	83-116	2	20	N.D.	N.D.	0 (1)	20
Calcium	105	102	81-118	1	20	15.9	16.0	0	20

\*- Outside of specification

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

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

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

## Quality Control Summary

Client Name: ExxonMobil  
Reported: 07/05/13 at 08:33 AM

Group Number: 1396775

### 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 RPD</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Chromium	103	105	81-120	1 20	N.D.	0.0012 J	200* (1)	20
Lead	104	104	75-125	0 20	N.D.	N.D.	0 (1)	20
Magnesium	102	103	75-125	0 20	7.20	7.17	0	20
Nickel	104	104	86-115	0 20	0.0036 J	0.0039 J	6 (1)	20
Selenium	101	101	75-125	1 20	N.D.	N.D.	0 (1)	20
Silver	113	113	75-125	0 20	N.D.	N.D.	0 (1)	20
Vanadium	104	104	90-111	0 20	0.0013 J	0.0014 J	7 (1)	20
Batch number: 131645713005			Sample number(s): 7091213-7091228 UNSPK: 7091217 BKG: 7091217					
Mercury	98	97	80-120	0 20	N.D.	N.D.	0 (1)	20

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 25-ml purge

Batch number: G131651AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7091213	98	92	100	97
7091214	98	92	100	97
7091215	99	93	98	94
7091216	99	94	100	96
7091217	99	94	100	96
7091218	98	92	101	98
7091219	98	94	101	98
7091221	99	93	99	95
7091222	99	93	100	96
7091223	99	93	100	95
7091224	99	94	99	96
7091225	99	94	101	96
7091226	99	94	100	95
7091227	100	94	100	94
7091228	99	93	99	95
7091229	100	95	100	96
Blank	99	93	99	96
LCS	98	94	101	98
MS	98	92	101	98
MSD	98	94	101	98

Limits: 77-114                  74-113                  77-110                  78-110

Analysis Name: PAHs in waters by SIM

Batch number: 13164WAK026

Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
------------------	--------------------	-------------------------

7091213	91	86	98
---------	----	----	----

\*- Outside of specification

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

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

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

**Quality Control Summary**

Client Name: ExxonMobil  
Reported: 07/05/13 at 08:33 AM

Group Number: 1396775

**Surrogate Quality Control**

7091214	90	88	98
7091215	82	77	90
7091216	91	78	97
7091217	93	83	101
7091218	92	84	105
7091219	92	91	104
7091221	88	82	96
7091222	88	80	95
7091223	88	91	98
7091224	82	74	94
7091225	88	72	94
7091226	81	70	88
7091227	89	78	101
7091228	89	76	90
Blank	96	93	102
LCS	92	94	103
MS	92	84	105
MSD	92	91	104

---

Limits: 64-120                  62-141                  58-134

\*- 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

For Lancaster Laboratories use only  
Acct. # 14739 Group # 1396775 Sample # 7091213-29  
Instructions on reverse side correspond with circled numbers.

pg. 1 of 2

<b>1 Client Information</b>		<b>4 Matrix</b>				<b>5 Analyses Requested</b>				SCR#:	
										Facility #/SID <u>Mayflower Pipeline Incident</u>	
Site Address <u>Mayflower, AR</u>		Sediment		H		N		H = HCl		T = Thiosulfate	
ExxonMobil PM <u>Scott Bushroe</u>		Soil		Ground		Surface		N = HNO <sub>3</sub>		B = NaOH	
Consultant/Office <u>ARC ADIS-US</u>		Composite		Potable		NPDES		S = H <sub>2</sub> SO <sub>4</sub>		O = Other	
Consultant PM <u>Steve Barrick</u>		3 Collected		Water		Air					
Sampler <u>Tyler Milburn / Josh Oliver</u>		Grab	Composite	Soil				Total # of Containers			
<b>2 Sample Identification</b>		Date	Time		X	X		6	X X X		
WS-003 (surface) 061213		6/12/13	0700	X				6	X X X		
WS-003 (surface) 061213			0720					6	X X X		
WS-BK6-002 (surface) 061213			0750					6	X X X		
WS-005 (surface) 061213			0800					6	X X X		
WS-006 (surface) 061213			0830					6	X X X		
WS-008 (surface) 061213 MS/MSD			0830					6	X X X		
WS-001 (surface) 061213			0850					6	X X X		
WS-001 (0.5-1.0) 061213			0900					6	X X X		
WS-004 (surface) 061213			0910					6	X X X		
WS-004 (0.5-1.0) 061213			0920					6	X X X		
WS-007 (surface) 061213			0940					6	X X X		
WS-007 (0.5-1.0) 061213			0950	↓	↓			6	X X X		
<b>7 Turnaround Time Requested (TAT) (please circle)</b>				Relinquished by <u>Tyler Milb</u>		Date 6/12/13	Time 1200	Received by	Date	Time	9
Standard	5 day	4 day	72 hour	48 hour	24 hour	Relinquished by	Date	Time	Received by	Date	Time
				Relinquished by		Date	Time	Received by	Date	Time	
				Relinquished by Commercial Carrier		UPS _____	FedEx <input checked="" type="checkbox"/>	Other _____	Received by <u>Alebrana Reissell</u>	Date 6/13/13	Time 0915
				Temperature Upon Receipt		0.6 - 2.7 °C			Custody Seals Intact?	<input checked="" type="checkbox"/> Yes	No
<b>8 Data Package (circle if required)</b>		<b>EDD (circle if required)</b>							Issued by Dept. 40 Management		
Type I - Full	EDD	Type VI (Raw Data)	EDD	Locus EIM (default)					7053.01		
NJ Reduced		Other _____									

Eurofins Lancaster Laboratories, Inc. • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

The white copy should accompany samples to Lancaster Laboratories. The yellow copy should be retained by the client.

# ExxonMobil Analysis Request/Chain of Custody



Lancaster  
Laboratories

For Lancaster Laboratories use only  
Acct. # 14739 Group # 1396775 Sample # 7091213-29  
Instructions on reverse side correspond with circled numbers.

PS. 2 of 2

<b>1 Client Information</b>		<b>4 Matrix</b>		<b>5 Analyses Requested</b>		<b>SCR#:</b> _____	
Facility #/SID <u>MayFlower Pipeline Incident</u> Site Address <u>Mayflower, AR</u> ExxonMobil PM <u>Scott Bushroe</u> Consultant/Office <u>ARCADIS - US</u> Consultant PM <u>Steve Barrick</u> Sampler <u>Tyler Milburn / Josh Oliver</u>		<b>4 Matrix</b> <input type="checkbox"/> Sediment <input type="checkbox"/> Ground <input checked="" type="checkbox"/> Surface  <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air  <input type="checkbox"/> Water <input type="checkbox"/> Oil 		<b>5 Analyses Requested</b> <b>Preservation Code</b> H N M S VOCs PAHs 8260B Benzene + Ni, V, Cr RGA Total # of Containers 6 X X X 6 X X X 2 X		<b>Preservation Codes</b> H = HCl      T = Thiosulfate N = HNO <sub>3</sub> B = NaOH S = H <sub>2</sub> SO <sub>4</sub> O = Other  <b>Remarks</b> <u>Date Analysis</u> <u>Questions:</u> <u>Lyndi Matt /</u> <u>ARCADIS</u>	
<b>2 Sample Identification</b> WS-006(surface)061213      6/12/13 1000      ✓ WS-006 (o.s-1)061213      ↓      1015      ✓ WS-TB-71-061213      ↓      —      ✓		<b>Collected</b> Date      Time      Grab      Composite Soil      Water      Oil					
<b>7 Turnaround Time Requested (TAT) (please circle)</b> Standard <u>5 day</u> 4 day 72 hour      48 hour      24 hour		Relinquished by <u>Tyler Mill</u> Relinquished by <u>Deborah Hale</u>		Date      Time <u>6/12/13</u> <u>1200</u>		Received by <u>Deborah Hale</u> Date      Time	
<b>8 Data Package</b> (circle if required) Type I - Full Type VI (Raw Data) NJ Reduced Other _____		<b>EDD</b> (circle if required) Locus EIM (default) Other _____		Relinquished by Commercial Carrier UPS      FedEx      Other		Received by <u>Deborah Hale</u> Date      Time <u>6/13/13</u> <u>0915</u>	
Temperature Upon Receipt <u>0.6-2.7 °C</u> Custody Seals Intact? <u>Yes</u> No							

Eurofins Lancaster Laboratories, Inc. • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300  
 The white copy should accompany samples to Lancaster Laboratories. The yellow copy should be retained by the client.

Issued by Dept. 40 Management

7053.01

Environmental Sample Administration  
Receipt Documentation Log

1396775

Client/Project: XOM Mayflower

Shipping Container Sealed:  YES NO

Date of Receipt: 6/13/13

Custody Seal Present \*:  YES NO

Time of Receipt: 0915

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

Source Code: 50-1

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	2.7	TB	WI	Y	B	
2	↓	0.6	↓	↓	↓	↓	
3							
4							
5							
6							

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

## Paperwork Discrepancy/Unpacking Problems:

---



---



---



---



---



---

Unpacker Signature/Emp#: Daneslund /208 Date/Time: 6/13/13 /0930

Issued by Dept. 6042 Management

2174.06

# Explanation of Symbols and Abbreviations

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

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

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

> greater than

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

**ppb** parts per billion

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

**Data Qualifiers:**

**C** – result confirmed by reanalysis.

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

**U.S. EPA CLP Data Qualifiers:**

**Organic Qualifiers**

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

**Inorganic Qualifiers**

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

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

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

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

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

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.