

## ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

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

October 11, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 10/07/2013

Group Number: 1424335

SDG: PEL94

PO Number: B0086003.1301

State of Sample Origin: AR

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
WS-014(1.5-2.0)100513 Grab Surface Water	7226983
WS-014(5.5-6.0)100513 Grab Surface Water	7226984
WS-012(1.5-2.0)100513 Grab Surface Water	7226985
WS-012(5.0-5.5)100513 Grab Surface Water	7226986
WS-010(1.5-2.0)100513 Grab Surface Water	7226987
WS-010(3.5-4.0)100513 Grab Surface Water	7226988
WS-006(0.5-1.0)100513 Grab Surface Water	7226989
WS-006(0.5-1.0)100513MS Grab Surface Water	7226990
WS-006(0.5-1.0)100513MSD Grab Surface Water	7226991
WS-006(0.5-1.0)100513DUP Grab Surface Water	7226992
WS-002(Surface)100513 Grab Surface Water	7226993
WS-011(1.5-2.0)100513 Grab Surface Water	7226994
WS-011(5.0-5.5)100513 Grab Surface Water	7226995
WS-018(Surface)100513 Grab Surface Water	7226996
WS-005(Surface)100513 Grab Surface Water	7226997
WS-003(Surface)100513 Grab Surface Water	7226998
WS-007(0.5-1.0)100513 Grab Surface Water	7226999
WS-001(0.5-1.0)100513 Grab Surface Water	7227000
WS-EB-82-100513 Grab Water	7227001

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

ELECTRONIC COPY TO  
ARCADIS

Attn: Stephen Barrick

ELECTRONIC COPY TO  
ARCADIS

Attn: Lyndi Mott

ELECTRONIC COPY TO  
ExxonMobil

Attn: Michael J. Firth

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

Respectfully Submitted,



Katherine A. Klinefelter  
Principal Specialist

(717) 556-7256

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Project Name: Mayflower, AR Pipeline Incident  
LLI Group #: 1424335

**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 8270C SIM, GC/MS Semivolatiles**

Batch #: 13281WAB026 (Sample number(s): 7226983-7226991, 7226993-7227001 UNSPK: 7226989)

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: Anthracene, Benzo(a)pyrene

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7226994, 7226995, 7226996

Sample #s: 7226994, 7226995, 7226996

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Sample Description: **WS-014(1.5-2.0)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226983**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 08:40 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05141 SDG#: PEL94-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
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-014(1.5-2.0)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226983**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 08:40 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05141 SDG#: PEL94-01

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 SW-846 8260B 25mL</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 SW-846 8270C SIM</b>						
			ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.057	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.057	1
08357	Anthracene	120-12-7	N.D.	0.011	0.057	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.057	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.057	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.057	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.057	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.057	1
08357	Chrysene	218-01-9	N.D.	0.011	0.057	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.057	1
08357	Fluoranthene	206-44-0	0.012 J	0.011	0.057	1
08357	Fluorene	86-73-7	N.D.	0.011	0.057	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.057	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.057	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.057	1
08357	Naphthalene	91-20-3	N.D.	0.034	0.057	1
08357	Phenanthrene	85-01-8	N.D.	0.034	0.057	1
08357	Pyrene	129-00-0	0.047 J	0.011	0.057	1
<b>Metals SM 2340 B-1997</b>						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	27.6	0.033	0.20	1
<b>SW-846 6010B</b>						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0107 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0548	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.22	0.0334	0.200	1

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

Sample Description: **WS-014(1.5-2.0)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226983**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 08:40 by RL ExxonMobil c/o Arcadis  
 630 Plaza Drive, Suite 600  
 Highlands Ranch CO 80129

Submitted: 10/07/2013 14:40  
 Reported: 10/11/2013 21:42

05141 SDG#: PEL94-01

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.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.93	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
<b>Wet Chemistry</b>						
	<b>EPA 1664A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	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	I132812AA	10/08/2013 22:24	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/08/2013 22:24	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 13:04	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 09:56	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 09:56	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 09:56	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 09:56	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 09:56	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 09:56	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 09:56	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 09:56	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 09:56	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 09:56	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 09:56	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 06:28	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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

Sample Description: WS-014(5.5-6.0)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226984  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 08:50 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05142 SDG#: PEL94-02

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	ug/l	ug/l	ug/l	
		purge				
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-014(5.5-6.0)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226984  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 08:50 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05142 SDG#: PEL94-02

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 SW-846 8260B 25mL purge</b>						
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 SW-846 8270C SIM</b>						
08357	Acenaphthene	83-32-9	N.D.	0.012	0.058	1
08357	Acenaphthylene	208-96-8	N.D.	0.012	0.058	1
08357	Anthracene	120-12-7	N.D.	0.012	0.058	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.012	0.058	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.012	0.058	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.012	0.058	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.012	0.058	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.012	0.058	1
08357	Chrysene	218-01-9	N.D.	0.012	0.058	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.012	0.058	1
08357	Fluoranthene	206-44-0	N.D.	0.012	0.058	1
08357	Fluorene	86-73-7	N.D.	0.012	0.058	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.012	0.058	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.012	0.058	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.012	0.058	1
08357	Naphthalene	91-20-3	N.D.	0.035	0.058	1
08357	Phenanthrene	85-01-8	N.D.	0.035	0.058	1
08357	Pyrene	129-00-0	N.D.	0.012	0.058	1
<b>Metals SM 2340 B-1997</b>						
06256	Total Hardness as CaCO3	471-34-1	27.2	0.033	0.20	1
<b>SW-846 6010B</b>						
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0525	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.13	0.0334	0.200	1

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



Sample Description: **WS-014(5.5-6.0)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226984**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 08:50 by RL ExxonMobil c/o Arcadis  
 630 Plaza Drive, Suite 600  
 Highlands Ranch CO 80129

Submitted: 10/07/2013 14:40  
 Reported: 10/11/2013 21:42

05142 SDG#: PEL94-02

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.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.89	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
<b>Wet Chemistry</b>						
	<b>EPA 1664A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	1.8 J	1.4	5.0	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	I132812AA	10/08/2013 22:45	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/08/2013 22:45	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 13:34	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 10:00	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 10:00	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 10:00	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 10:00	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 10:00	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 10:00	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 10:00	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 10:00	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 10:00	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 10:00	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 10:00	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 06:30	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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

Sample Description: **WS-012(1.5-2.0)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226985**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 09:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05121 SDG#: PEL94-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
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-012(1.5-2.0)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226985**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 09:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05121 SDG#: PEL94-03

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 SW-846 8260B 25mL</b>						
			<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
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 SW-846 8270C SIM</b>						
			<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.056	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.056	1
08357	Anthracene	120-12-7	N.D.	0.011	0.056	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.056	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.056	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.056	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.056	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.056	1
08357	Chrysene	218-01-9	N.D.	0.011	0.056	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.056	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.056	1
08357	Fluorene	86-73-7	N.D.	0.011	0.056	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.056	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.056	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.056	1
08357	Naphthalene	91-20-3	N.D.	0.033	0.056	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.056	1
08357	Pyrene	129-00-0	N.D.	0.011	0.056	1
<b>Metals SM 2340 B-1997</b>						
			<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
06256	Total Hardness as CaCO3	471-34-1	28.2	0.033	0.20	1
<b>SW-846 6010B</b>						
			<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0343	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.35	0.0334	0.200	1

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

Sample Description: **WS-012(1.5-2.0)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226985**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 09:00 by RL ExxonMobil c/o Arcadis  
 630 Plaza Drive, Suite 600  
 Highlands Ranch CO 80129

Submitted: 10/07/2013 14:40  
 Reported: 10/11/2013 21:42

05121 SDG#: PEL94-03

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	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.00	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
<b>Wet Chemistry</b>						
	<b>EPA 1664A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	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	I132812AA	10/08/2013 23:06	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/08/2013 23:06	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 14:03	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 10:12	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 10:12	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 10:12	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 10:12	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 10:12	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 10:12	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 10:12	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 10:12	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 10:12	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 10:12	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 10:12	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 06:36	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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

Sample Description: **WS-012(5.0-5.5)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226986**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 09:10 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05122 SDG#: PEL94-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
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-012(5.0-5.5)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226986**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 09:10 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05122 SDG#: PEL94-04

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 SW-846 8260B 25mL</b>						
			<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
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 SW-846 8270C SIM</b>						
			<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.054	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.054	1
08357	Anthracene	120-12-7	N.D.	0.011	0.054	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.054	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.054	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.054	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.054	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.054	1
08357	Chrysene	218-01-9	N.D.	0.011	0.054	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.054	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.054	1
08357	Fluorene	86-73-7	N.D.	0.011	0.054	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.054	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.054	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.054	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.054	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.054	1
08357	Pyrene	129-00-0	N.D.	0.011	0.054	1
<b>Metals SM 2340 B-1997</b>						
			<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
06256	Total Hardness as CaCO3	471-34-1	28.2	0.033	0.20	1
<b>SW-846 6010B</b>						
			<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0351	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.37	0.0334	0.200	1

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

Sample Description: **WS-012(5.0-5.5)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226986**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 09:10 by RL ExxonMobil c/o Arcadis  
 630 Plaza Drive, Suite 600  
 Highlands Ranch CO 80129  
 Submitted: 10/07/2013 14:40  
 Reported: 10/11/2013 21:42

05122 SDG#: PEL94-04

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.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.99	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
<b>Wet Chemistry</b>						
	<b>EPA 1664A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	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	I132812AA	10/08/2013 23:27	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/08/2013 23:27	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 14:32	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 10:16	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 10:16	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 10:16	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 10:16	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 10:16	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 10:16	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 10:16	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 10:16	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 10:16	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 10:16	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 10:16	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 06:38	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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

Sample Description: WS-010(1.5-2.0)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226987  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 09:40 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05101 SDG#: PEL94-05

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	ug/l	ug/l	ug/l	
		purge				
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-010(1.5-2.0)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226987  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 09:40 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05101 SDG#: PEL94-05

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 SW-846 8260B 25mL</b>						
			ug/l	ug/l	ug/l	
	<b>purge</b>					
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 SW-846 8270C SIM</b>						
			ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.056	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.056	1
08357	Anthracene	120-12-7	N.D.	0.011	0.056	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.056	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.056	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.056	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.056	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.056	1
08357	Chrysene	218-01-9	N.D.	0.011	0.056	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.056	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.056	1
08357	Fluorene	86-73-7	N.D.	0.011	0.056	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.056	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.056	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.056	1
08357	Naphthalene	91-20-3	N.D.	0.034	0.056	1
08357	Phenanthrene	85-01-8	N.D.	0.034	0.056	1
08357	Pyrene	129-00-0	N.D.	0.011	0.056	1
<b>Metals SM 2340 B-1997</b>						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	28.4	0.033	0.20	1
<b>SW-846 6010B</b>						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0092 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0446	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.40	0.0334	0.200	1

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

Sample Description: **WS-010(1.5-2.0)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226987**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 09:40 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05101 SDG#: PEL94-05

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.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.01	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
<b>Wet Chemistry</b>						
	<b>EPA 1664A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	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	I132812AA	10/08/2013 23:48	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/08/2013 23:48	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 15:01	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	2	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 10:20	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 10:20	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 10:20	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 10:20	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 10:20	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 10:20	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 10:20	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 10:20	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 10:20	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 10:20	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 10:20	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 06:40	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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

Sample Description: WS-010(3.5-4.0)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226988  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 09:50 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05102 SDG#: PEL94-06

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	ug/l	ug/l	ug/l	
		purge				
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-010(3.5-4.0)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226988  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 09:50 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05102 SDG#: PEL94-06

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 SW-846 8260B 25mL purge</b>						
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 SW-846 8270C SIM</b>						
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	0.030 J	0.010	0.050	1
<b>Metals SM 2340 B-1997</b>						
06256	Total Hardness as CaCO3	471-34-1	28.1	0.033	0.20	1
<b>SW-846 6010B</b>						
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0471	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.33	0.0334	0.200	1

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

Sample Description: **WS-010(3.5-4.0)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226988**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 09:50 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05102 SDG#: PEL94-06

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.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.98	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
<b>Wet Chemistry</b>						
	<b>EPA 1664A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	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	I132812AA	10/09/2013 00:09	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/09/2013 00:09	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 15:31	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 10:24	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 10:24	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 10:24	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 10:24	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 10:24	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 10:24	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 10:24	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 10:24	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 10:24	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 10:24	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 10:24	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 06:42	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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

Sample Description: WS-006(0.5-1.0)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226989  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 10:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05006 SDG#: PEL94-07BKG

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	ug/l	ug/l	ug/l	
		purge				
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(0.5-1.0)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226989  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 10:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05006 SDG#: PEL94-07BKG

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 SW-846 8260B 25mL</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 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	0.013 J	0.010	0.050	1
<b>Metals SM 2340 B-1997</b>						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	28.1	0.033	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	0.0561	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.34	0.0334	0.200	1

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

Sample Description: **WS-006(0.5-1.0)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226989**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 10:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05006 SDG#: PEL94-07BKG

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.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.99	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		<b>SW-846 7470A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
<b>Wet Chemistry</b>						
		<b>EPA 1664A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	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	I132812AA	10/09/2013 00:30	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/09/2013 00:30	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 00:02	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 09:32	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 09:32	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 09:32	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 09:32	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 09:32	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 09:32	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 09:32	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 09:32	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 09:32	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 09:32	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 09:32	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 06:44	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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



Sample Description: **WS-006(0.5-1.0)100513MS Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226990**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 10:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05006 SDG#: PEL94-07MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
02898	Acetone	67-64-1	42	3.0	5.0	1
02898	Allyl Chloride	107-05-1	5.0	0.1	0.5	1
02898	Benzene	71-43-2	5.3	0.1	0.5	1
02898	Bromobenzene	108-86-1	4.9	0.1	0.5	1
02898	Bromochloromethane	74-97-5	5.0	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	5.0	0.1	0.5	1
02898	Bromoform	75-25-2	4.7	0.1	0.5	1
02898	Bromomethane	74-83-9	4.8	0.1	0.5	1
02898	2-Butanone	78-93-3	39	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	5.3	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	5.3	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	5.1	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	5.3	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.0	0.1	0.5	1
02898	Chloroethane	75-00-3	5.1	0.1	0.5	1
02898	Chloroform	67-66-3	5.2	0.1	0.5	1
02898	Chloromethane	74-87-3	5.3	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.1	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.1	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	4.9	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	4.8	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	4.9	0.1	0.5	1
02898	Dibromomethane	74-95-3	5.1	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.1	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.2	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.1	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	5.2	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.4	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	5.1	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	5.5	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	5.1	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	5.3	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	4.9	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.5	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	5.0	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	5.3	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	5.2	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	5.2	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.1	0.1	0.5	1
02898	Freon 113	76-13-1	5.3	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	5.1	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	5.0	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	5.2	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	4.7	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	26	1.0	5.0	1
02898	Methylene Chloride	75-09-2	5.4	0.2	0.5	1

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

Sample Description: **WS-006(0.5-1.0)100513MS Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226990**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 10:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05006 SDG#: PEL94-07MS

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 SW-846 8260B 25mL</b>						
			<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
02898	n-Propylbenzene	103-65-1	5.3	0.1	0.5	1
02898	Styrene	100-42-5	4.9	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	4.9	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	4.9	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	24	2.0	5.0	1
02898	Toluene	108-88-3	5.0	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	4.9	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	4.9	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	5.2	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	5.1	0.1	0.5	1
02898	Trichloroethene	79-01-6	5.2	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	5.3	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	5.2	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	5.1	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	5.2	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	5.3	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	15	0.1	0.5	1
<b>GC/MS Semivolatiles SW-846 8270C SIM</b>						
			<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
08357	Acenaphthene	83-32-9	0.93	0.010	0.051	1
08357	Acenaphthylene	208-96-8	1.0	0.010	0.051	1
08357	Anthracene	120-12-7	0.65	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.87	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.47	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.95	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.71	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.85	0.010	0.051	1
08357	Chrysene	218-01-9	0.93	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	0.78	0.010	0.051	1
08357	Fluoranthene	206-44-0	0.94	0.010	0.051	1
08357	Fluorene	86-73-7	1.0	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.76	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	1.0	0.030	0.051	1
08357	Phenanthrene	85-01-8	0.98	0.030	0.051	1
08357	Pyrene	129-00-0	1.1	0.010	0.051	1
<b>Metals SM 2340 B-1997</b>						
			<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
06256	Total Hardness as CaCO3	471-34-1	46.4	0.033	0.20	1
<b>SW-846 6010B</b>						
			<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	0.160	0.0068	0.0200	1
07046	Barium	7440-39-3	2.05	0.0033	0.0050	1
07049	Cadmium	7440-43-9	0.0507	0.00076	0.0050	1
01750	Calcium	7440-70-2	10.4	0.0334	0.200	1

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

Sample Description: **WS-006 (0.5-1.0)100513MS Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226990**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 10:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05006 SDG#: PEL94-07MS

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	0.204	0.0016	0.0150	1
07055	Lead	7439-92-1	0.160	0.0047	0.0150	1
01757	Magnesium	7439-95-4	5.00	0.0167	0.100	1
07061	Nickel	7440-02-0	0.519	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.153	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0453	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.512	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	0.00099	0.000060	0.00020	1
<b>Wet Chemistry</b>						
	<b>EPA 1664A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	36.9	1.4	5.0	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	I132812AA	10/09/2013 00:51	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/09/2013 00:51	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 00:31	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 09:44	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 09:44	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 09:44	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 09:44	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 09:44	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 09:44	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 09:44	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 09:44	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 09:44	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 09:44	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 09:44	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 06:48	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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

Sample Description: **WS-006(0.5-1.0)100513MSD Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226991**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 10:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05006 SDG#: PEL94-07MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/1</b>	<b>ug/1</b>	<b>ug/1</b>	
	<b>purge</b>					
02898	Acetone	67-64-1	42	3.0	5.0	1
02898	Allyl Chloride	107-05-1	5.1	0.1	0.5	1
02898	Benzene	71-43-2	5.4	0.1	0.5	1
02898	Bromobenzene	108-86-1	5.1	0.1	0.5	1
02898	Bromochloromethane	74-97-5	5.1	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	5.1	0.1	0.5	1
02898	Bromoform	75-25-2	4.8	0.1	0.5	1
02898	Bromomethane	74-83-9	4.9	0.1	0.5	1
02898	2-Butanone	78-93-3	38	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	5.4	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	5.4	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	5.3	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	5.3	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.2	0.1	0.5	1
02898	Chloroethane	75-00-3	5.1	0.1	0.5	1
02898	Chloroform	67-66-3	5.3	0.1	0.5	1
02898	Chloromethane	74-87-3	5.2	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.2	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.2	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	4.8	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	5.0	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	5.1	0.1	0.5	1
02898	Dibromomethane	74-95-3	5.1	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.2	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.3	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.2	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	5.3	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.5	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	5.6	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	5.2	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	5.4	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	4.9	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	5.2	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	5.2	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	5.4	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	5.3	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	4.9	0.1	0.5	1
02898	Ethyl ether	60-29-7	5.2	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.2	0.1	0.5	1
02898	Freon 113	76-13-1	5.4	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	5.1	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	5.1	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	5.3	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	26	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

Sample Description: **WS-006 (0.5-1.0)100513MSD Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226991**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 10:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05006 SDG#: PEL94-07MSD

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 SW-846 8260B 25mL</b>						
			<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
02898	n-Propylbenzene	103-65-1	5.4	0.1	0.5	1
02898	Styrene	100-42-5	5.0	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	5.0	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	5.4	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	5.1	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	24	2.0	5.0	1
02898	Toluene	108-88-3	5.1	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	5.1	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	5.3	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	5.3	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	5.3	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	5.3	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	5.3	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	5.2	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	15	0.1	0.5	1
<b>GC/MS Semivolatiles SW-846 8270C SIM</b>						
			<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
08357	Acenaphthene	83-32-9	0.93	0.010	0.052	1
08357	Acenaphthylene	208-96-8	1.1	0.010	0.052	1
08357	Anthracene	120-12-7	0.61	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	0.85	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	0.47	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	0.91	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	0.81	0.010	0.052	1
08357	Chrysene	218-01-9	0.91	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	0.75	0.010	0.052	1
08357	Fluoranthene	206-44-0	0.94	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	0.73	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	0.98	0.031	0.052	1
08357	Pyrene	129-00-0	0.94	0.010	0.052	1
<b>Metals SM 2340 B-1997</b>						
			<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
06256	Total Hardness as CaCO3	471-34-1	45.9	0.033	0.20	1
<b>SW-846 6010B</b>						
			<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	0.157	0.0068	0.0200	1
07046	Barium	7440-39-3	2.03	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0498	0.00076	0.0050	1
01750	Calcium	7440-70-2	10.2	0.0334	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

Sample Description: **WS-006 (0.5-1.0)100513MSD Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226991**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 10:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05006 SDG#: PEL94-07MSD

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	0.201	0.0016	0.0150	1
07055	Lead	7439-92-1	0.156	0.0047	0.0150	1
01757	Magnesium	7439-95-4	4.95	0.0167	0.100	1
07061	Nickel	7440-02-0	0.511	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.153	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0443	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.506	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	0.0010	0.000060	0.00020	1
<b>Wet Chemistry</b>						
	<b>EPA 1664A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	41.3	1.4	5.0	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	I132812AA	10/09/2013 01:12	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/09/2013 01:12	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 01:00	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 09:48	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 09:48	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 09:48	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 09:48	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 09:48	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 09:48	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 09:48	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 09:48	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 09:48	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 09:48	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 09:48	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 06:51	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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

Sample Description: WS-006 (0.5-1.0)100513DUP Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226992  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 10:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05006 SDG#: PEL94-07DUP

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>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
06256	Total Hardness as CaCO3	471-34-1	28.1	0.033	0.20	1
		<b>SW-846 6010B</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0552	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.31	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.99	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		<b>SW-846 7470A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
<b>Wet Chemistry</b>						
		<b>EPA 1664A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	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 CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 09:40	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 09:40	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 09:40	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 09:40	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 09:40	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 09:40	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 09:40	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 09:40	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 09:40	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 09:40	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 09:40	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 06:46	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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

Sample Description: **WS-002 (Surface)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226993**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 10:30 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05002 SDG#: PEL94-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
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)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226993  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 10:30 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05002 SDG#: PEL94-08

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 SW-846 8260B 25mL</b>						
			ug/l	ug/l	ug/l	
	<b>purge</b>					
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 SW-846 8270C SIM</b>						
			ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.054	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.054	1
08357	Anthracene	120-12-7	N.D.	0.011	0.054	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.054	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.054	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.054	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.054	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.054	1
08357	Chrysene	218-01-9	N.D.	0.011	0.054	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.054	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.054	1
08357	Fluorene	86-73-7	N.D.	0.011	0.054	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.054	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.054	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.054	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.054	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.054	1
08357	Pyrene	129-00-0	N.D.	0.011	0.054	1
<b>Metals SM 2340 B-1997</b>						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	28.6	0.033	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	0.0437	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.52	0.0334	0.200	1

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

Sample Description: **WS-002 (Surface)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226993**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 10:30 by RL ExxonMobil c/o Arcadis  
 630 Plaza Drive, Suite 600  
 Highlands Ranch CO 80129  
 Submitted: 10/07/2013 14:40  
 Reported: 10/11/2013 21:42

05002 SDG#: PEL94-08

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	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.00	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
<b>Wet Chemistry</b>						
	<b>EPA 1664A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	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	I132812AA	10/09/2013 01:34	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/09/2013 01:34	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 16:00	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 10:28	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 10:28	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 10:28	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 10:28	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 10:28	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 10:28	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 10:28	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 10:28	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 10:28	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 10:28	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 10:28	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 06:53	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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

Sample Description: **WS-011(1.5-2.0)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226994**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 10:50 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05111 SDG#: PEL94-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
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-011(1.5-2.0)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226994**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 10:50 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

051111 SDG#: PEL94-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
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</b>	<b>Semivolatiles</b>	<b>SW-846 8270C SIM</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.052	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.052	1
08357	Anthracene	120-12-7	N.D.	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	N.D.	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	N.D.	0.010	0.052	1
08357	Fluorene	86-73-7	N.D.	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	N.D.	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.052	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.052	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.052	1
08357	Pyrene	129-00-0	N.D.	0.010	0.052	1

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

<b>Metals</b>	<b>SM 2340 B-1997</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>		
06256	Total Hardness as CaCO3	471-34-1	28.4	0.033	0.20	1
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0451	0.00033	0.0050	1

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

Sample Description: WS-011(1.5-2.0)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226994  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 10:50 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05111 SDG#: PEL94-09

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>	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.37	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.04	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		<b>SW-846 7470A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
<b>Wet Chemistry</b>						
		<b>EPA 1664A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	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	I132812AA	10/09/2013 01:55	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/09/2013 01:55	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 16:29	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 10:32	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 10:32	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 10:32	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 10:32	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 10:32	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 10:32	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 10:32	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 10:32	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 10:32	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 10:32	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 10:32	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 06:55	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1

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

Sample Description: WS-011(1.5-2.0)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226994  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 10:50 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05111 SDG#: PEL94-09

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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

Sample Description: WS-011(5.0-5.5)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226995  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 11:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05112 SDG#: PEL94-10

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	ug/l	ug/l	ug/l	
		purge				
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-011(5.0-5.5)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226995**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 11:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05112 SDG#: PEL94-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
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</b>	<b>Semivolatiles</b>	<b>SW-846 8270C SIM</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
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

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

<b>Metals</b>	<b>SM 2340 B-1997</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>		
06256	Total Hardness as CaCO3	471-34-1	28.5	0.033	0.20	1
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0454	0.00033	0.0050	1

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



Sample Description: WS-011(5.0-5.5)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226995  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 11:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05112 SDG#: PEL94-10

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>	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.38	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.05	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
<b>Wet Chemistry</b>						
	<b>EPA 1664A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	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	I132812AA	10/09/2013 02:16	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/09/2013 02:16	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 16:58	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 10:36	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 10:36	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 10:36	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 10:36	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 10:36	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 10:36	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 10:36	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 10:36	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 10:36	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 10:36	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 10:36	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 07:01	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1

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

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Sample Description: WS-011(5.0-5.5)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226995  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 11:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05112 SDG#: PEL94-10

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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

Sample Description: **WS-018 (Surface)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226996**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 11:20 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05018 SDG#: PEL94-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
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-018 (Surface)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226996**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 11:20 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05018 SDG#: PEL94-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
		<b>purge</b>				
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</b>	<b>Semivolatiles</b>	<b>SW-846 8270C SIM</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.052	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.052	1
08357	Anthracene	120-12-7	N.D.	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	N.D.	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	N.D.	0.010	0.052	1
08357	Fluorene	86-73-7	N.D.	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	N.D.	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.052	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.052	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.052	1
08357	Pyrene	129-00-0	N.D.	0.010	0.052	1

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

<b>Metals</b>	<b>SM 2340 B-1997</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>		
06256	Total Hardness as CaCO3	471-34-1	19.3	0.033	0.20	1
	<b>SW-846 6010B</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	0.0071 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0343	0.00033	0.0050	1

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

Sample Description: **WS-018 (Surface)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226996**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 11:20 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05018 SDG#: PEL94-11

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>	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.56	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	1.91	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
<b>Wet Chemistry</b>						
	<b>EPA 1664A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	2.0 J	1.4	5.0	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	I132812AA	10/09/2013 02:38	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/09/2013 02:38	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 17:28	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 10:40	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 10:40	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 10:40	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 10:40	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 10:40	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 10:40	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 10:40	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 10:40	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 10:40	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 10:40	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 10:40	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 07:03	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1

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

Sample Description: WS-018(Surface)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226996  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 11:20 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05018 SDG#: PEL94-11

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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

Sample Description: WS-005(Surface)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226997  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 10:10 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05005 SDG#: PEL94-12

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	ug/l	ug/l	ug/l	
		purge				
02898	Acetone	67-64-1	6.8	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)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226997**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 10:10 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05005 SDG#: PEL94-12

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 SW-846 8260B 25mL</b>						
			<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
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	2.0	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 SW-846 8270C SIM</b>						
			<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.057	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.057	1
08357	Anthracene	120-12-7	N.D.	0.011	0.057	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.057	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.057	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.057	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.057	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.057	1
08357	Chrysene	218-01-9	N.D.	0.011	0.057	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.057	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.057	1
08357	Fluorene	86-73-7	N.D.	0.011	0.057	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.057	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.057	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.057	1
08357	Naphthalene	91-20-3	N.D.	0.034	0.057	1
08357	Phenanthrene	85-01-8	N.D.	0.034	0.057	1
08357	Pyrene	129-00-0	N.D.	0.011	0.057	1
<b>Metals SM 2340 B-1997</b>						
			<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
06256	Total Hardness as CaCO3	471-34-1	73.0	0.033	0.20	1
<b>SW-846 6010B</b>						
			<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
07035	Arsenic	7440-38-2	0.0105 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.139	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	18.3	0.0334	0.200	1

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



Sample Description: **WS-005 (Surface)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226997**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 10:10 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05005 SDG#: PEL94-12

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	0.0030 J	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	6.62	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0044 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.0046 J	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
<b>Wet Chemistry</b>						
	<b>EPA 1664A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	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	I132812AA	10/09/2013 02:59	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/09/2013 02:59	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 17:57	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 10:44	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 10:44	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 10:44	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 10:44	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 10:44	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 10:44	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 10:44	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 10:44	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 10:44	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 10:44	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 10:44	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 07:05	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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

Sample Description: **WS-003 (Surface)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226998**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 11:30 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05003 SDG#: PEL94-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
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-003 (Surface)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226998  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 11:30 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05003 SDG#: PEL94-13

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 SW-846 8260B 25mL</b>						
			ug/l	ug/l	ug/l	
	<b>purge</b>					
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 SW-846 8270C SIM</b>						
			ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.012	0.062	1
08357	Acenaphthylene	208-96-8	N.D.	0.012	0.062	1
08357	Anthracene	120-12-7	N.D.	0.012	0.062	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.012	0.062	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.012	0.062	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.012	0.062	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.012	0.062	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.012	0.062	1
08357	Chrysene	218-01-9	N.D.	0.012	0.062	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.012	0.062	1
08357	Fluoranthene	206-44-0	N.D.	0.012	0.062	1
08357	Fluorene	86-73-7	N.D.	0.012	0.062	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.012	0.062	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.012	0.062	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.012	0.062	1
08357	Naphthalene	91-20-3	N.D.	0.037	0.062	1
08357	Phenanthrene	85-01-8	N.D.	0.037	0.062	1
08357	Pyrene	129-00-0	N.D.	0.012	0.062	1
<b>Metals SM 2340 B-1997</b>						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	27.1	0.033	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	0.0468	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.10	0.0334	0.200	1

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

Sample Description: **WS-003 (Surface)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226998**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 11:30 by RL ExxonMobil c/o Arcadis  
 630 Plaza Drive, Suite 600  
 Highlands Ranch CO 80129  
 Submitted: 10/07/2013 14:40  
 Reported: 10/11/2013 21:42

05003 SDG#: PEL94-13

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.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.88	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	<b>SW-846 7470A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
<b>Wet Chemistry</b>						
	<b>EPA 1664A</b>		<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	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	I132812AA	10/09/2013 03:20	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/09/2013 03:20	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 18:26	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 10:48	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 10:48	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 10:48	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 10:48	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 10:48	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 10:48	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 10:48	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 10:48	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 10:48	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 10:48	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 10:48	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 07:07	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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

Sample Description: WS-007(0.5-1.0)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7226999  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 11:50 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05007 SDG#: PEL94-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
		purge				
02898	Acetone	67-64-1	4.5 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-007(0.5-1.0)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226999**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 11:50 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05007 SDG#: PEL94-14

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 SW-846 8260B 25mL</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 SW-846 8270C SIM</b>						
			ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.055	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.055	1
08357	Anthracene	120-12-7	N.D.	0.011	0.055	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.055	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.055	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.055	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.055	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.055	1
08357	Chrysene	218-01-9	N.D.	0.011	0.055	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.055	1
08357	Fluoranthene	206-44-0	0.011 J	0.011	0.055	1
08357	Fluorene	86-73-7	N.D.	0.011	0.055	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.055	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.055	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.055	1
08357	Naphthalene	91-20-3	N.D.	0.033	0.055	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.055	1
08357	Pyrene	129-00-0	0.011 J	0.011	0.055	1
<b>Metals SM 2340 B-1997</b>						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	9.5	0.033	0.20	1
<b>SW-846 6010B</b>						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0088 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0143	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	2.17	0.0334	0.200	1

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

Sample Description: **WS-007(0.5-1.0)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7226999**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 11:50 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05007 SDG#: PEL94-14

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	0.0032 J	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	0.987	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0043 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.0027 J	0.0020	0.0050	1
		<b>SW-846 7470A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
<b>Wet Chemistry</b>						
		<b>EPA 1664A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	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	I132812AA	10/09/2013 03:41	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/09/2013 03:41	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 18:55	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 11:00	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 11:00	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 11:00	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 11:00	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 11:00	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 11:00	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 11:00	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 11:00	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 11:00	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 11:00	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 11:00	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 07:09	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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

Sample Description: **WS-001(0.5-1.0)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7227000**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 12:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05001 SDG#: PEL94-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
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)100513 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7227000  
LL Group # 1424335  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/05/2013 12:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05001 SDG#: PEL94-15

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 SW-846 8260B 25mL</b>						
			ug/l	ug/l	ug/l	
	<b>purge</b>					
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 SW-846 8270C SIM</b>						
			ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.012	0.058	1
08357	Acenaphthylene	208-96-8	N.D.	0.012	0.058	1
08357	Anthracene	120-12-7	N.D.	0.012	0.058	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.012	0.058	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.012	0.058	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.012	0.058	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.012	0.058	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.012	0.058	1
08357	Chrysene	218-01-9	N.D.	0.012	0.058	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.012	0.058	1
08357	Fluoranthene	206-44-0	N.D.	0.012	0.058	1
08357	Fluorene	86-73-7	N.D.	0.012	0.058	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.012	0.058	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.012	0.058	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.012	0.058	1
08357	Naphthalene	91-20-3	N.D.	0.035	0.058	1
08357	Phenanthrene	85-01-8	N.D.	0.035	0.058	1
08357	Pyrene	129-00-0	N.D.	0.012	0.058	1
<b>Metals SM 2340 B-1997</b>						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	29.6	0.033	0.20	1
<b>SW-846 6010B</b>						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0083 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0542	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.80	0.0334	0.200	1

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

Sample Description: **WS-001(0.5-1.0)100513 Grab Surface Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7227000**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 12:00 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05001 SDG#: PEL94-15

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.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.06	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0018 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.0022 J	0.0020	0.0050	1
		<b>SW-846 7470A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
<b>Wet Chemistry</b>						
		<b>EPA 1664A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	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	I132812AA	10/09/2013 04:02	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/09/2013 04:02	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 19:25	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 11:04	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 11:04	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 11:04	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 11:04	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 11:04	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 11:04	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 11:04	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 11:04	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 11:04	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 11:04	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 11:04	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 07:11	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13284807902A	10/11/2013 08:45	Yolunder Y Bunch	1

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

Sample Description: **WS-EB-82-100513 Grab Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7227001**  
LL Group # **1424335**  
Account # **14739**

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

Collected: 10/05/2013 12:30 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05E82 SDG#: PEL94-16EB\*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
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-EB-82-100513 Grab Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7227001**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 12:30 by RL

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

Submitted: 10/07/2013 14:40

Reported: 10/11/2013 21:42

05E82 SDG#: PEL94-16EB\*

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 SW-846 8260B 25mL</b>						
			ug/l	ug/l	ug/l	
	<b>purge</b>					
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 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	0.086	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 SM 2340 B-1997</b>						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	0.81	0.033	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	0.00066 J	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	0.249	0.0334	0.200	1

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

Sample Description: **WS-EB-82-100513 Grab Water**  
**Mayflower, AR**  
**Pipeline Incident**

LL Sample # **WW 7227001**  
 LL Group # **1424335**  
 Account # **14739**

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

Collected: 10/05/2013 12:30 by RL

ExxonMobil c/o Arcadis  
 630 Plaza Drive, Suite 600  
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Submitted: 10/07/2013 14:40

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05E82 SDG#: PEL94-16EB\*

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.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	0.0451 J	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		<b>SW-846 7470A</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

### General Sample Comments

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	I132812AA	10/09/2013 04:23	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132812AA	10/09/2013 04:23	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13281WAB026	10/09/2013 19:54	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13281WAB026	10/08/2013 18:00	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132846256014	10/11/2013 12:20	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132801848009	10/11/2013 11:08	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132801848009	10/11/2013 11:08	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132801848009	10/11/2013 11:08	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132801848009	10/11/2013 11:08	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132801848009	10/11/2013 11:08	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132801848009	10/11/2013 11:08	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132801848009	10/11/2013 11:08	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132801848009	10/11/2013 11:08	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132801848009	10/11/2013 11:08	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132801848009	10/11/2013 11:08	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132801848009	10/11/2013 11:08	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132805713002	10/09/2013 07:13	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132801848009	10/08/2013 10:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132805713002	10/08/2013 16:15	Nelli S Markaryan	1

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

## Quality Control Summary

Client Name: ExxonMobil c/o Arcadis  
Reported: 10/11/13 at 09:42 PM

Group Number: 1424335

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: I132812AA	Sample number(s): 7226983-7226991, 7226993-7227001								
Acetone	N.D.	3.0	5.0	ug/l	104		60-139		
Allyl Chloride	N.D.	0.1	0.5	ug/l	94		61-130		
Benzene	N.D.	0.1	0.5	ug/l	99		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	95		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	97		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	95		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	94		73-128		
Bromomethane	N.D.	0.1	0.5	ug/l	90		62-126		
2-Butanone	N.D.	1.0	5.0	ug/l	100		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	95		80-120		
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	96		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	94		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	93		80-129		
Chlorobenzene	N.D.	0.1	0.5	ug/l	95		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	92		68-120		
Chloroform	N.D.	0.1	0.5	ug/l	98		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	96		55-120		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	95		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	96		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	92		64-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	96		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	98		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	98		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	98		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	98		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	98		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	91		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	100		80-120		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	99		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	97		80-123		
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	96		80-120		
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	98		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	89		75-145		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	104		80-120		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	100		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	91		75-122		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	95		80-121		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	100		80-123		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	94		80-120		
Ethyl ether	N.D.	0.1	0.5	ug/l	77		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	94		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	89		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	91		73-120		

\*- Outside of specification

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

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

## Quality Control Summary

Client Name: ExxonMobil c/o Arcadis  
Reported: 10/11/13 at 09:42 PM

Group Number: 1424335

<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>LCS %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Isopropylbenzene	N.D.	0.1	0.5	ug/l	92		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	94		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	93		80-120		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	103		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	101		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	98		80-120		
Styrene	N.D.	0.1	0.5	ug/l	93		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	93		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	106		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	90		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	97		65-131		
Toluene	N.D.	0.1	0.5	ug/l	93		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	96		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	94		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	94		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	100		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	96		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	92		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	104		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	97		80-120		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	97		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	93		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	93		80-120		

Batch number: 13281WAB026

Sample number(s): 7226983-7226991, 7226993-7227001

Acenaphthene	N.D.	0.010	0.050	ug/l	96		77-118		
Acenaphthylene	N.D.	0.010	0.050	ug/l	101		80-123		
Anthracene	N.D.	0.010	0.050	ug/l	99		78-123		
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	100		73-127		
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	105		72-120		
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	120		79-136		
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	99		64-130		
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	105		73-131		
Chrysene	N.D.	0.010	0.050	ug/l	105		76-125		
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	97		58-131		
Fluoranthene	N.D.	0.010	0.050	ug/l	104		79-124		
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	99		62-130		
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	108		80-126		
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	107		81-124		
Naphthalene	N.D.	0.030	0.050	ug/l	101		75-120		
Phenanthrene	N.D.	0.030	0.050	ug/l	97		75-120		
Pyrene	N.D.	0.010	0.050	ug/l	108		71-130		

Batch number: 132801848009

Sample number(s): 7226983-7227001

Arsenic	N.D.	0.0068	0.0200	mg/l	104		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	101		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	101		90-112		
Calcium	0.0366 J	0.0334	0.200	mg/l	100		90-112		
Chromium	N.D.	0.0016	0.0150	mg/l	102		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	106		88-110		
Magnesium	N.D.	0.0167	0.100	mg/l	100		89-110		
Nickel	N.D.	0.0015	0.0100	mg/l	105		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	105		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	90		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	102		90-110		

\*- Outside of specification

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

## Quality Control Summary

Client Name: ExxonMobil c/o Arcadis  
Reported: 10/11/13 at 09:42 PM

Group Number: 1424335

<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>LCS %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 132805713002 Mercury	Sample number(s): 7226983-7227001 N.D.	0.00006	0.00020	mg/l	99		80-120		
Batch number: 13284807902A HEM (oil & grease)	Sample number(s): 7226983-7227000 N.D.	1.4	5.0	mg/l	99	97	78-114	2	16

## Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: I132812AA	Sample number(s): 7226983-7226991, 7226993-7227001 UNSPK: 7226989								
Acetone	111	112	57-163	1	30				
Allyl Chloride	100	102	56-160	2	30				
Benzene	106	108	87-126	2	30				
Bromobenzene	98	101	80-123	3	30				
Bromochloromethane	99	102	82-125	2	30				
Bromodichloromethane	99	101	82-133	2	30				
Bromoform	94	97	60-138	3	30				
Bromomethane	97	97	66-130	0	30				
2-Butanone	103	101	56-160	2	30				
n-Butylbenzene	106	108	83-131	2	30				
sec-Butylbenzene	106	108	84-128	2	30				
tert-Butylbenzene	102	105	84-135	3	30				
Carbon Tetrachloride	105	107	81-148	2	30				
Chlorobenzene	100	103	78-133	3	30				
Chloroethane	101	101	70-139	0	30				
Chloroform	104	106	86-136	2	30				
Chloromethane	105	104	49-135	2	30				
2-Chlorotoluene	102	104	75-134	3	30				
4-Chlorotoluene	101	104	76-134	3	30				
1,2-Dibromo-3-chloropropane	97	96	43-143	1	30				
Dibromochloromethane	96	100	79-125	4	30				
1,2-Dibromoethane	98	102	84-127	3	30				
Dibromomethane	101	103	83-126	2	30				
1,2-Dichlorobenzene	103	104	83-117	1	30				
1,3-Dichlorobenzene	103	106	79-132	3	30				
1,4-Dichlorobenzene	102	104	79-120	2	30				
Dichlorodifluoromethane	104	106	28-136	1	30				
1,1-Dichloroethane	108	111	88-136	3	30				
1,2-Dichloroethane	103	105	82-135	2	30				
1,1-Dichloroethene	110	113	83-150	2	30				
cis-1,2-Dichloroethene	103	105	82-129	2	30				
trans-1,2-Dichloroethene	107	108	88-127	2	30				
Dichlorofluoromethane	99	99	81-161	0	30				
1,2-Dichloropropane	109	112	91-126	2	30				
1,3-Dichloropropane	101	105	80-127	3	30				
2,2-Dichloropropane	101	104	80-134	3	30				
1,1-Dichloropropene	106	108	86-139	2	30				

\*- Outside of specification

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



## Quality Control Summary

Client Name: ExxonMobil c/o Arcadis  
Reported: 10/11/13 at 09:42 PM

Group Number: 1424335

### Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
cis-1,3-Dichloropropene	104	107	74-132	3	30				
trans-1,3-Dichloropropene	95	99	71-128	4	30				
Ethyl ether	103	104	57-139	1	30				
Ethylbenzene	101	104	80-140	2	30				
Freon 113	106	108	77-147	2	30				
Hexachlorobutadiene	101	103	65-128	2	30				
Isopropylbenzene	100	103	81-133	3	30				
p-Isopropyltoluene	103	105	84-124	2	30				
Methyl Tertiary Butyl Ether	95	98	82-132	3	30				
4-Methyl-2-Pentanone	103	105	69-149	2	30				
Methylene Chloride	107	109	77-135	2	30				
n-Propylbenzene	106	109	79-131	2	30				
Styrene	98	101	63-151	3	30				
1,1,1,2-Tetrachloroethane	97	100	87-126	3	30				
1,1,2,2-Tetrachloroethane	107	108	75-131	1	30				
Tetrachloroethene	98	101	75-129	3	30				
Tetrahydrofuran	95	94	56-154	1	30				
Toluene	100	103	83-127	3	30				
1,2,3-Trichlorobenzene	99	102	73-125	3	30				
1,2,4-Trichlorobenzene	98	100	77-120	2	30				
1,1,1-Trichloroethane	103	106	85-140	3	30				
1,1,2-Trichloroethane	102	105	85-129	3	30				
Trichloroethene	104	107	85-131	2	30				
Trichlorofluoromethane	106	107	73-139	0	30				
1,2,3-Trichloropropane	105	106	76-120	2	30				
1,2,4-Trimethylbenzene	103	105	87-126	3	30				
1,3,5-Trimethylbenzene	104	106	89-129	2	30				
Vinyl Chloride	106	104	62-135	1	30				
Xylene (Total)	99	102	81-137	3	30				

Batch number: 13281WAB026 Sample number(s): 7226983-7226991,7226993-7227001 UNSPK: 7226989

Acenaphthene	92	89	47-136	0	30				
Acenaphthylene	103	101	33-146	1	30				
Anthracene	64*	58*	69-119	6	30				
Benzo(a)anthracene	86	81	37-150	2	30				
Benzo(a)pyrene	47*	45*	64-123	0	30				
Benzo(b)fluoranthene	94	87	33-152	4	30				
Benzo(g,h,i)perylene	70	65	36-138	4	30				
Benzo(k)fluoranthene	84	78	31-142	4	30				
Chrysene	91	87	34-135	1	30				
Dibenz(a,h)anthracene	77	71	17-134	4	30				
Fluoranthene	93	90	39-147	0	30				
Fluorene	100	98	38-149	1	30				
Indeno(1,2,3-cd)pyrene	75	70	29-143	5	30				
1-Methylnaphthalene	108	107	49-152	2	30				
2-Methylnaphthalene	105	104	51-146	3	30				
Naphthalene	103	103	58-131	3	30				
Phenanthrene	97	94	48-140	0	30				
Pyrene	105	89	59-125	13	30				

Batch number: 132801848009 Sample number(s): 7226983-7227001 UNSPK: 7226989 BKG: 7226989  
Arsenic 107 105 81-123 2 20 N.D. N.D. 0 (1) 20

\*- Outside of specification

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

## Quality Control Summary

Client Name: ExxonMobil c/o Arcadis  
Reported: 10/11/13 at 09:42 PM

Group Number: 1424335

### Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup</u> <u>RPD</u> <u>Max</u>
Barium	100	99	78-118	1	20	0.0561	0.0552	2	20
Cadmium	101	100	83-116	2	20	N.D.	N.D.	0 (1)	20
Calcium	100	97	75-125	1	20	6.34	6.31	1	20
Chromium	102	100	76-120	2	20	N.D.	N.D.	0 (1)	20
Lead	107	104	75-125	3	20	N.D.	N.D.	0 (1)	20
Magnesium	100	98	75-125	1	20	2.99	2.99	0	20
Nickel	104	102	86-115	2	20	N.D.	N.D.	0 (1)	20
Selenium	102	102	75-125	0	20	N.D.	N.D.	0 (1)	20
Silver	91	89	75-125	2	20	N.D.	N.D.	0 (1)	20
Vanadium	102	101	90-117	1	20	N.D.	N.D.	0 (1)	20
Batch number: 132805713002	Sample number(s): 7226983-7227001 UNSPK: 7226989 BKG: 7226989								
Mercury	99	102	80-120	3	20	N.D.	N.D.	0 (1)	20
Batch number: 13284807902A	Sample number(s): 7226983-7227000 UNSPK: 7226989 BKG: 7226989								
HEM (oil & grease)	88	91	78-114	11	29	N.D.	N.D.	0 (1)	18

### 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: I132812AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7226983	100	106	97	96
7226984	100	106	97	96
7226985	100	107	98	97
7226986	101	107	97	97
7226987	101	110	97	97
7226988	100	106	98	96
7226989	100	104	98	96
7226990	100	103	98	99
7226991	100	105	98	99
7226993	99	105	97	97
7226994	100	107	97	97
7226995	99	105	97	96
7226996	100	108	97	98
7226997	100	106	97	97
7226998	101	107	98	97
7226999	100	105	98	96
7227000	100	105	97	96
7227001	100	102	98	96
Blank	99	104	98	96
LCS	101	103	98	99
MS	100	103	98	99
MSD	100	105	98	99

\*- Outside of specification

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

## Quality Control Summary

Client Name: ExxonMobil c/o Arcadis  
Reported: 10/11/13 at 09:42 PM

Group Number: 1424335

### Surrogate Quality Control

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

Analysis Name: PAHs in waters by SIM

Batch number: 13281WAB026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7226983	101	80	101
7226984	96	72	98
7226985	97	76	100
7226986	95	73	97
7226987	99	76	100
7226988	97	77	100
7226989	97	76	100
7226990	97	66	102
7226991	93	65	101
7226993	96	71	99
7226994	87	46*	96
7226995	93	54*	100
7226996	80	45*	91
7226997	97	80	101
7226998	95	66	98
7226999	95	80	96
7227000	99	80	101
7227001	96	96	100
Blank	102	105	105
LCS	97	103	103
MS	97	66	102
MSD	93	65	101

Limits: 44-137                      62-141                      51-136

\*- Outside of specification

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# ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories  
Environmental

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only

Group # 1424335 Sample # 7226983-7001

Instructions on reverse side correspond with circled numbers.

1 of 3

1 Client Information				4 Matrix				5 Analyses Requested								6 Remarks	
Facility #/SID <u>Mayflower Pipeline Incident</u>				Sediment <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/>	Ground <input type="checkbox"/> Surface <input checked="" type="checkbox"/>	Preservation Code								SCR#: _____			
Site Address <u>Mayflower, AR</u>						H <input type="checkbox"/> N <input type="checkbox"/> F <input type="checkbox"/>								Preservation Codes H = HCl      T = Thiosulfate N = HNO <sub>3</sub> B = NaOH S = H <sub>2</sub> SO <sub>4</sub> O = Other			
ExxonMobil PM <u>Scott Bushroe</u>		Cost Center/AFE				Total # of Containers <u>VOCS 8260 B</u> <u>PAH 8270 SIM</u> <u>RCRMetals <sup>press</sup> Nj, V, Ca, Mg</u> <u>Diss Metals</u> <u>HEM Oil &amp; Grease</u>								6 <u>Lab to filter and pressure diss. metals upon receipt</u>			
Consultant/Office <u>ARCADIS</u>																	
Consultant PM <u>Steve Barrick</u>		Consultant Phone # <u>919-302-6799</u>															
Sampler <u>Ryan Lewis/Dave Drost</u>				Grab <input type="checkbox"/> Composite <input type="checkbox"/>													
Sample Identification		Collected															
		Date	Time														
WS-014 (1.5-2.0) 100513		10-5-2013	0840														
WS-014 (5.5-6.0) 100513		10-5-2013	0850														
WS-012 (1.5-2.0) 100513		10-5-2013	0900														
WS-012 (5.0-5.5) 100513		10-5-2013	0910														
WS-010 (1.5-2.0) 100513		10-5-2013	0940														
WS-010 (3.5-4.0) 100513		10-5-2013	0950														
WS-006 (0.5-1.0) 100513		10-5-2013	1000														
WS-006 (0.5-1.0) 100513 MS/MSD		10-5-2013	1000									MS/MSD					
WS-002 (Surface) 100513		10-5-2013	1030														
WS-011 (1.5-2.0) 100513		10-5-2013	1050														
WS-011 (5.0-5.5) 100513		10-5-2013	1100														
WS-018 (Surface) 100513		10-5-2013	1120														

  

7 Turnaround Time Requested (TAT) (please circle)			Relinquished by <u>Ryan Lewis</u>		Date <u>10-6-13</u>	Time <u>1600</u>	Received by	Date	Time	9	
Standard <u>5 day</u> 4 day			Relinquished by		Date	Time	Received by	Date	Time		
72 hour      48 hour      24 hour			Relinquished by		Date	Time	Received by	Date	Time		
8 Data Package (circle if required) Type I - Full Type VI (Raw Data) NJ Reduced Other _____			EDD (circle if required) Locus EIM (default) Other _____		Relinquished by Commercial Carrier			Received by	Date	Time	
					UPS _____ FedEx _____ Other <u>Southwest</u>			<u>Annalisa H. Owen</u>	<u>10/7/13</u>	<u>1440</u>	
			Temperature Upon Receipt <u>0.4-2.7°C</u>			Custody Seals Intact? <u>Yes</u> No					

# ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories  
Environmental

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only  
Group # 1424335 Sample # 7226783 -7001  
Instructions on reverse side correspond with circled numbers.

2 of 3

1 Client Information				4 Matrix				5 Analyses Requested								6 Remarks																																	
Facility #/SID <u>Mayflower Pipeline Incident</u>				Sediment <input type="checkbox"/>	Ground <input type="checkbox"/>	Surface <input checked="" type="checkbox"/>	Potable <input type="checkbox"/>	NPDES <input type="checkbox"/>	Air <input type="checkbox"/>	Oil <input type="checkbox"/>	Total # of Containers	Preservation Code								SCR#: _____																													
Site Address <u>Mayflower, AR</u>												<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">H</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td style="text-align: center;">H</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>								H																		H											
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H																																																	
ExxonMobil PM <u>Scott Bushroe</u>				Soil <input type="checkbox"/>				Water <input type="checkbox"/>				VOCS <u>8260B</u>				Lab to filter and pressure dss. metals upon receipt																																	
Cost Center/AFE				Oil <input type="checkbox"/>				PAH <u>8720 SIM</u>				RCRA Metals <u>Trace Metals</u>																																					
Consultant/Office <u>ARCADIS</u>				Composited <input type="checkbox"/>				Diss Metals				HEM Oil & Grease																																					
Consultant PM <u>Steve Barrick</u>				Grab <input type="checkbox"/>				Total # of Containers				HEM Oil & Grease																																					
Consultant Phone # <u>919 302-6799</u>				Composite <input type="checkbox"/>				Total # of Containers				HEM Oil & Grease																																					
Sampler <u>Ryan Lewis / Dave Drost</u>				Soil <input type="checkbox"/>				Water <input type="checkbox"/>				HEM Oil & Grease																																					
2 Sample Identification				Collected		Oil <input type="checkbox"/>				HEM Oil & Grease				Lab to filter and pressure dss. metals upon receipt																																			
				Date	Time	Total # of Containers				HEM Oil & Grease																																							
WS-005 (Surface) 100513				10-5-2013	1010	X	Total # of Containers				HEM Oil & Grease																																						
WS-003 (Surface) 100513				10-5-2013	1130	X	Total # of Containers				HEM Oil & Grease																																						
WS-007 (0.5-1.0) 100513				10-5-2013	1150	X	Total # of Containers				HEM Oil & Grease																																						
WS-001 (0.5-1.0) 100513				10-5-2013	1200	X	Total # of Containers				HEM Oil & Grease																																						
WS-EB-82-100513				10-5-2013	1230	X	Total # of Containers				HEM Oil & Grease																																						
WS-014 (1.5-2.0) 100613				10-6-2013	0830	X	Total # of Containers				HEM Oil & Grease																																						
WS-014 (5.5-6.0) 100613				10-6-2013	0840	X	Total # of Containers				HEM Oil & Grease																																						
WS-012 (1.5-2.0) 100613				10-6-2013	0855	X	Total # of Containers				HEM Oil & Grease																																						
WS-012 (5.0-5.5) 100613				10-6-2013	0900	X	Total # of Containers				HEM Oil & Grease																																						
WS-010 (1.5-2.0) 100613				10-6-2013	0920	X	Total # of Containers				HEM Oil & Grease																																						
WS-010 (3.5-4.0) 100613				10-6-2013	0925	X	Total # of Containers				HEM Oil & Grease																																						
WS-006 (0.5-1.0) 100613				10-6-2013	0935	X	Total # of Containers				HEM Oil & Grease																																						
7 Turnaround Time Requested (TAT) (please circle)				Standard		5 day	4 day	Relinquished by <u>[Signature]</u> Date <u>10-6-13</u> Time <u>1600</u>				Received by		Date	Time																																		
				72 hour		48 hour	24 hour					Received by		Date	Time																																		
				Relinquished by		Date						Time		Received by		Date	Time																																
				Relinquished by		Date						Time		Received by		Date	Time																																
8 Data Package (circle if required)				Relinquished by Commercial Carrier				Temperature Upon Receipt <u>0.4-2-7°C</u>				Received by		Date	Time																																		
												Type I - Full		Type VI (Raw Data)		NJ Reduced		Other _____		Received by <u>Annalisa H. Owen</u>		Date <u>10/7/13</u>	Time <u>1440</u>																										
9				Relinquished by				Temperature Upon Receipt <u>0.4-2-7°C</u>				Custody Seals Intact?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>																																		
												Type I - Full		Type VI (Raw Data)		NJ Reduced		Other _____		Received by		Date	Time																										

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

Environmental Sample Administration  
Receipt Documentation Log

1424 335

Client/Project: Exxon Mobil: Mayflower  
 Date of Receipt: 10/7/13  
 Time of Receipt: 1440  
 Source Code: 01

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

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT131	1.4	TB	WI	Y	B	
2	↓	1.7	↓	↓	↓	↓	
3	↓	0.8	↓	↓	↓	↓	
4	↓	2.7	↓	↓	↓	↓	
5	↓	1.6	↓	↓	↓	↓	
6	↓	2.1	↓	↓	↓	↓	

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

Paperwork Discrepancy/Unpacking Problems:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Unpacker Signature/Emp#: Anneliese H. Owen/210 Date/Time: 10/7/13 1510

Environmental Sample Administration  
Receipt Documentation Log

1424335

Client/Project: Exxon Mobil: Mayflower

Shipping Container Sealed: YES NO

Date of Receipt: 10/7/13

Custody Seal Present \* : YES NO

Time of Receipt: 1440

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

Source Code: 01

Package: Chilled Not Chilled

Temperature of Shipping Containers

Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
<del>7</del>	DT121	1.8	TB	WI	Y	B	
<del>8</del>	↓	1.2	↓	↓	↓	↓	
<del>9</del>	↓	1.0	↓	↓	↓	↓	
<del>10</del>	↓	1.5	↓	↓	↓	↓	
<del>11</del>	↓	0.4	↓	↓	↓	↓	
<del>12</del>	↓	1.7	↓	↓	↓	↓	

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

Paperwork Discrepancy/Unpacking Problems:

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Unpacker Signature/Emp#: Anneke H. Owen / 210 Date/Time: 10/7/13 1510

# Explanation of Symbols and Abbreviations

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

<b>RL</b>	Reporting Limit	<b>BMQL</b>	Below Minimum Quantitation Level
<b>N.D.</b>	none detected	<b>MPN</b>	Most Probable Number
<b>TNTC</b>	Too Numerous To Count	<b>CP Units</b>	cobalt-chloroplatinate units
<b>IU</b>	International Units	<b>NTU</b>	nephelometric turbidity units
<b>umhos/cm</b>	micromhos/cm	<b>ng</b>	nanogram(s)
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>meq</b>	milliequivalents	<b>lb.</b>	pound(s)
<b>g</b>	gram(s)	<b>kg</b>	kilogram(s)
<b>µg</b>	microgram(s)	<b>mg</b>	milligram(s)
<b>mL</b>	milliliter(s)	<b>L</b>	liter(s)
<b>m<sup>3</sup></b>	cubic meter(s)	<b>µL</b>	microliter(s)
		<b>pg/L</b>	picogram/liter

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

> greater than

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

**ppb** parts per billion

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

*Data Qualifiers:*

**C** – result confirmed by reanalysis.

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

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

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

**Inorganic Qualifiers**

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

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

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

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

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

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