

ANALYTICAL RESULTS

Prepared by:

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Prepared for:

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

September 23, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 09/16/2013

Group Number: 1419156

SDG: PEL51

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)091513 Grab Surface Water	7199364
WS-014(5.5-6.0)091513 Grab Surface Water	7199365
WS-012(1.5-2.0)091513 Grab Surface Water	7199366
WS-012(5.0-5.5)091513 Grab Surface Water	7199367
WS-010(1.5-2.0)091513 Grab Surface Water	7199368
WS-010(3.5-4.0)091513 Grab Surface Water	7199369
WS-006(0.5-1.0)091513 Grab Surface Water	7199370
WS-006(0.5-1.0)091513MS Grab Surface Water	7199371
WS-006(0.5-1.0)091513MSD Grab Surface Water	7199372
WS-006(0.5-1.0)091513DUP Grab Surface Water	7199373
WS-005(Surface)091513 Grab Surface Water	7199374
WS-002(Surface)091513 Grab Surface Water	7199375
WS-011(1.5-2.0)091513 Grab Surface Water	7199376
WS-011(5.0-5.5)091513 Grab Surface Water	7199377
WS-018(Surface)091513 Grab Surface Water	7199378
WS-003(Surface)091513 Grab Surface Water	7199379
WS-007(0.5-1.0)091513 Grab Surface Water	7199380
WS-001(0.5-1.0)091513 Grab Surface Water	7199381
WS-EB-62-091513 Grab Water	7199382
WS-TB-150-091513 Water	7199383

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

ELECTRONIC COPY TO
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ARCADIS
ARCADIS

Attn: Stephen Barrick

Attn: Lyndi Mott

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

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1419156

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 #: 13260WAJ026 (Sample number(s): 7199364-7199372, 7199374-7199382 UNSPK: 7199370)

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) 7199370, 7199378, 7199379, 7199381

Sample #s: 7199370, 7199378, 7199379, 7199381

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.

EPA 1664A, wet Chemistry

Batch #: 13264807902A (Sample number(s): 7199364-7199381 UNSPK: 7199370 BKG: 7199370)

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: HEM (oil & grease)

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside outside acceptance windows: HEM (oil & grease)

Sample Description: WS-014(1.5-2.0)091513 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199364
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 08:50 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5101 SDG#: PEL51-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	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(1.5-2.0)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199364**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 08:50 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5101 SDG#: PEL51-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B 25mL						
			ug/l	ug/l	ug/l	
	purge					
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
GC/MS Semivolatiles SW-846 8270C SIM						
			ug/l	ug/l	ug/l	
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
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	30.9	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0529	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.03	0.0334	0.200	1

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

Sample Description: **WS-014(1.5-2.0)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199364**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 08:50 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5101 SDG#: PEL51-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
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	3.23	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
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
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	H132601AA	09/17/2013 11:09	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 11:09	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 05:06	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 17:22	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 17:22	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 17:22	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 17:22	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 17:22	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 17:22	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 17:22	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 17:22	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 17:22	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 17:22	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 17:22	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:15	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: **WS-014(5.5-6.0)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199365**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 09:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5102 SDG#: PEL51-02

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)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199365**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 09:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5102 SDG#: PEL51-02

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	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
GC/MS Semivolatiles SW-846 8270C SIM						
			ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	30.6	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0089 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0520	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.98	0.0334	0.200	1

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

Sample Description: **WS-014(5.5-6.0)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199365**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 09:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5102 SDG#: PEL51-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
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	3.20	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
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
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	H132601AA	09/17/2013 11:30	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 11:30	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 05:35	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 17:26	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 17:26	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 17:26	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 17:26	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 17:26	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 17:26	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 17:26	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 17:26	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 17:26	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 17:26	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 17:26	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:17	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: **WS-012(1.5-2.0)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199366**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 09:20 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5103 SDG#: PEL51-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	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-012(1.5-2.0)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199366**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 09:20 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5103 SDG#: PEL51-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B 25mL						
			ug/l	ug/l	ug/l	
	purge					
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
GC/MS Semivolatiles SW-846 8270C SIM						
			ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	30.8	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0097 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0755	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.04	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-012(1.5-2.0)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199366**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 09:20 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5103 SDG#: PEL51-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
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	3.21	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
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
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	H132601AA	09/17/2013 11:51	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 11:51	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 06:05	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 17:38	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 17:38	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 17:38	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 17:38	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 17:38	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 17:38	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 17:38	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 17:38	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 17:38	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 17:38	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 17:38	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:19	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: WS-012(5.0-5.5)091513 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199367
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 09:30 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5104 SDG#: PEL51-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	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-012(5.0-5.5)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199367**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 09:30 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5104 SDG#: PEL51-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B 25mL						
			ug/l	ug/l	ug/l	
	purge					
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
GC/MS Semivolatiles SW-846 8270C SIM						
			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	N.D.	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	N.D.	0.011	0.055	1
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	30.8	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0091 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0785	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.03	0.0334	0.200	1

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

Sample Description: **WS-012(5.0-5.5)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199367**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 09:30 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5104 SDG#: PEL51-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
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	3.22	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
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
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	H132601AA	09/17/2013 12:12	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 12:12	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 06:34	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 17:42	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 17:42	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 17:42	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 17:42	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 17:42	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 17:42	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 17:42	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 17:42	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 17:42	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 17:42	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 17:42	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:21	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: **WS-010(1.5-2.0)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199368**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 09:40 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5105 SDG#: PEL51-05

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)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199368**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 09:40 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5105 SDG#: PEL51-05

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	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
GC/MS Semivolatiles SW-846 8270C SIM						
			ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	30.1	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0541	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.84	0.0334	0.200	1

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

Sample Description: **WS-010(1.5-2.0)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199368**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 09:40 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5105 SDG#: PEL51-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
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	3.17	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
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
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	H132601AA	09/17/2013 12:33	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 12:33	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 07:03	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 17:46	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 17:46	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 17:46	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 17:46	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 17:46	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 17:46	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 17:46	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 17:46	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 17:46	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 17:46	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 17:46	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:23	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: WS-010(3.5-4.0)091513 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199369
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 09:50 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5106 SDG#: PEL51-06

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)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199369**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 09:50 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5106 SDG#: PEL51-06

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	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
GC/MS Semivolatiles SW-846 8270C SIM						
			ug/l	ug/l	ug/l	
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
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	30.4	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0087 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0591	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.92	0.0334	0.200	1

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

Sample Description: **WS-010(3.5-4.0)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199369**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 09:50 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5106 SDG#: PEL51-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
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	3.20	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
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
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	H132601AA	09/17/2013 12:54	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 12:54	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 07:33	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 17:50	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 17:50	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 17:50	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 17:50	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 17:50	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 17:50	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 17:50	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 17:50	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 17:50	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 17:50	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 17:50	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:30	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: WS-006(0.5-1.0)091513 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199370
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 10:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5107 SDG#: PEL51-07BKG

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)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199370**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 10:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5107 SDG#: PEL51-07BKG

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	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
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1

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.

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	30.9	0.033	0.20	1
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0077 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0494	0.00033	0.0050	1

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

Sample Description: **WS-006(0.5-1.0)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199370**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 10:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5107 SDG#: PEL51-07BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.04	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	3.23	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
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
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	H132601AA	09/17/2013 13:14	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 13:14	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 03:38	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 16:58	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 16:58	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 16:58	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 16:58	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 16:58	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 16:58	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 16:58	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 16:58	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 16:58	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 16:58	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 16:58	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:32	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1

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

Sample Description: WS-006(0.5-1.0)091513 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199370
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 10:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5107 SDG#: PEL51-07BKG

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	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: **WS-006 (0.5-1.0) 091513MS Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199371**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 10:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5107 SDG#: PEL51-07MS

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	30	3.0	5.0	1
02898	Allyl Chloride	107-05-1	4.3	0.1	0.5	1
02898	Benzene	71-43-2	4.4	0.1	0.5	1
02898	Bromobenzene	108-86-1	4.7	0.1	0.5	1
02898	Bromochloromethane	74-97-5	5.0	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	4.5	0.1	0.5	1
02898	Bromoform	75-25-2	5.2	0.1	0.5	1
02898	Bromomethane	74-83-9	4.2	0.1	0.5	1
02898	2-Butanone	78-93-3	29	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	4.4	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	4.5	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	4.4	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	4.8	0.1	0.5	1
02898	Chlorobenzene	108-90-7	4.7	0.1	0.5	1
02898	Chloroethane	75-00-3	4.2	0.1	0.5	1
02898	Chloroform	67-66-3	4.6	0.1	0.5	1
02898	Chloromethane	74-87-3	3.8	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	4.5	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	4.5	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	4.5	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	4.7	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	4.7	0.1	0.5	1
02898	Dibromomethane	74-95-3	4.5	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	4.7	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	4.7	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	4.7	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	3.9	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	4.4	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	4.7	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	4.6	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	4.4	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	4.6	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	5.0	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	4.6	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	4.5	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	4.6	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	4.7	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	4.6	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	4.5	0.1	0.5	1
02898	Ethyl ether	60-29-7	4.3	0.1	0.5	1
02898	Ethylbenzene	100-41-4	4.5	0.1	0.5	1
02898	Freon 113	76-13-1	4.5	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	4.5	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	4.7	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	4.3	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	4.4	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	23	1.0	5.0	1
02898	Methylene Chloride	75-09-2	4.5	0.2	0.5	1

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

Sample Description: WS-006 (0.5-1.0) 091513MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199371
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 10:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5107 SDG#: PEL51-07MS

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	n-Propylbenzene	103-65-1	4.5	0.1	0.5	1
02898	Styrene	100-42-5	4.8	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	4.8	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	4.7	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	4.7	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	19	2.0	5.0	1
02898	Toluene	108-88-3	4.5	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	4.4	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	4.6	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	4.7	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	4.6	0.1	0.5	1
02898	Trichloroethene	79-01-6	4.8	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	4.7	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	4.9	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	4.4	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	4.5	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	4.1	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	14	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	0.86	0.010	0.051	1
08357	Acenaphthylene	208-96-8	0.92	0.010	0.051	1
08357	Anthracene	120-12-7	0.56	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.74	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.42	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.73	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.63	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.69	0.010	0.051	1
08357	Chrysene	218-01-9	0.76	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	0.72	0.010	0.051	1
08357	Fluoranthene	206-44-0	0.97	0.010	0.051	1
08357	Fluorene	86-73-7	0.95	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.69	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	1.1	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	1.0	0.010	0.051	1
08357	Naphthalene	91-20-3	0.98	0.031	0.051	1
08357	Phenanthrene	85-01-8	0.88	0.031	0.051	1
08357	Pyrene	129-00-0	0.75	0.010	0.051	1
Metals		SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	48.8	0.033	0.20	1
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.155	0.0068	0.0200	1
07046	Barium	7440-39-3	2.09	0.0033	0.0050	1
07049	Cadmium	7440-43-9	0.0511	0.00076	0.0050	1
01750	Calcium	7440-70-2	11.0	0.0334	0.200	1

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

Sample Description: **WS-006 (0.5-1.0) 091513MS Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199371**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 10:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5107 SDG#: PEL51-07MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	0.203	0.0016	0.0150	1
07055	Lead	7439-92-1	0.151	0.0047	0.0150	1
01757	Magnesium	7439-95-4	5.19	0.0167	0.100	1
07061	Nickel	7440-02-0	0.515	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.149	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0469	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.506	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.00096	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	15.0	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	H132601AA	09/17/2013 13:35	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 13:35	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 04:07	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 17:10	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 17:10	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 17:10	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 17:10	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 17:10	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 17:10	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 17:10	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 17:10	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 17:10	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 17:10	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 17:10	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:36	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: **WS-006 (0.5-1.0) 091513MSD Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199372**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 10:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5107 SDG#: PEL51-07MSD

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	32	3.0	5.0	1
02898	Allyl Chloride	107-05-1	4.1	0.1	0.5	1
02898	Benzene	71-43-2	4.6	0.1	0.5	1
02898	Bromobenzene	108-86-1	4.7	0.1	0.5	1
02898	Bromochloromethane	74-97-5	4.6	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	4.6	0.1	0.5	1
02898	Bromoform	75-25-2	5.3	0.1	0.5	1
02898	Bromomethane	74-83-9	4.5	0.1	0.5	1
02898	2-Butanone	78-93-3	31	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	4.6	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	4.6	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	4.6	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	5.1	0.1	0.5	1
02898	Chlorobenzene	108-90-7	4.8	0.1	0.5	1
02898	Chloroethane	75-00-3	4.5	0.1	0.5	1
02898	Chloroform	67-66-3	4.7	0.1	0.5	1
02898	Chloromethane	74-87-3	4.2	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	4.6	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	4.6	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	5.0	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	4.8	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	4.8	0.1	0.5	1
02898	Dibromomethane	74-95-3	4.6	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	4.8	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	4.8	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	4.8	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	4.2	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	4.6	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	4.8	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	4.9	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	4.6	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	4.9	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	5.5	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	4.7	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	4.6	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	4.8	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	4.9	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	4.7	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	4.5	0.1	0.5	1
02898	Ethyl ether	60-29-7	4.3	0.1	0.5	1
02898	Ethylbenzene	100-41-4	4.7	0.1	0.5	1
02898	Freon 113	76-13-1	4.7	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	4.6	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	4.9	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	4.5	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	4.5	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	23	1.0	5.0	1
02898	Methylene Chloride	75-09-2	4.5	0.2	0.5	1

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

Sample Description: **WS-006 (0.5-1.0) 091513MSD Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199372**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 10:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5107 SDG#: PEL51-07MSD

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	
02898	n-Propylbenzene	103-65-1	4.6	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	4.7	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	5.0	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	20	2.0	5.0	1
02898	Toluene	108-88-3	4.7	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	4.6	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	4.7	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	5.0	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	4.7	0.1	0.5	1
02898	Trichloroethene	79-01-6	4.9	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	5.1	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	5.0	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	4.6	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	4.6	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	4.5	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	14	0.1	0.5	1
GC/MS Semivolatiles SW-846 8270C SIM						
			ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	0.91	0.010	0.052	1
08357	Acenaphthylene	208-96-8	0.98	0.010	0.052	1
08357	Anthracene	120-12-7	0.59	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	0.80	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	0.78	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	0.74	0.010	0.052	1
08357	Chrysene	218-01-9	0.83	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	0.78	0.010	0.052	1
08357	Fluoranthene	206-44-0	1.0	0.010	0.052	1
08357	Fluorene	86-73-7	1.0	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.73	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	0.95	0.031	0.052	1
08357	Pyrene	129-00-0	0.80	0.010	0.052	1
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	48.0	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.156	0.0068	0.0200	1
07046	Barium	7440-39-3	2.06	0.0033	0.0050	1
07049	Cadmium	7440-43-9	0.0503	0.00076	0.0050	1
01750	Calcium	7440-70-2	10.8	0.0334	0.200	1

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

Sample Description: **WS-006 (0.5-1.0) 091513MSD Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199372**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 10:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5107 SDG#: PEL51-07MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	0.200	0.0016	0.0150	1
07055	Lead	7439-92-1	0.151	0.0047	0.0150	1
01757	Magnesium	7439-95-4	5.11	0.0167	0.100	1
07061	Nickel	7440-02-0	0.510	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.148	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0454	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.504	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.00097	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	20.2	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	H132601AA	09/17/2013 13:56	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 13:56	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 04:36	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 17:14	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 17:14	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 17:14	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 17:14	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 17:14	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 17:14	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 17:14	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 17:14	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 17:14	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 17:14	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 17:14	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:38	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: WS-006 (0.5-1.0) 091513DUP Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199373
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 10:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5107 SDG#: PEL51-07DUP

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	30.6	0.033	0.20	1
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0073 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0497	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.98	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	3.19	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
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
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	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 17:06	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 17:06	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 17:06	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 17:06	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 17:06	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 17:06	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 17:06	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 17:06	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 17:06	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 17:06	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 17:06	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:34	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: WS-005 (Surface) 091513 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199374
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 10:35 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5108 SDG#: PEL51-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	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-005 (Surface) 091513 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199374
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 10:35 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5108 SDG#: PEL51-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B 25mL						
			ug/l	ug/l	ug/l	
	purge					
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
GC/MS Semivolatiles SW-846 8270C SIM						
			ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.050	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.050	1
08357	Anthracene	120-12-7	N.D.	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.050	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.050	1
08357	Chrysene	218-01-9	N.D.	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.050	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.050	1
08357	Fluorene	86-73-7	N.D.	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.050	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.050	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.050	1
08357	Pyrene	129-00-0	N.D.	0.010	0.050	1
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	29.6	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0359	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.86	0.0334	0.200	1

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

Sample Description: **WS-005 (Surface) 091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199374**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 10:35 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5108 SDG#: PEL51-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
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	3.03	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0027 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	1.5 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	H132601AA	09/17/2013 14:38	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 14:38	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 08:02	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 17:54	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 17:54	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 17:54	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 17:54	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 17:54	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 17:54	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 17:54	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 17:54	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 17:54	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 17:54	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 17:54	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:40	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: **WS-002 (Surface) 091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199375**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 10:50 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5109 SDG#: PEL51-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	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-002 (Surface) 091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199375**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 10:50 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5109 SDG#: PEL51-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B 25mL purge						
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
GC/MS Semivolatiles SW-846 8270C SIM						
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
Metals SM 2340 B-1997						
06256	Total Hardness as CaCO3	471-34-1	30.8	0.033	0.20	1
SW-846 6010B						
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0536	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.09	0.0334	0.200	1

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

Sample Description: **WS-002 (Surface) 091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199375**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 10:50 by HV ExxonMobil c/o Arcadis
 630 Plaza Drive, Suite 600
 Highlands Ranch CO 80129

Submitted: 09/16/2013 13:15
 Reported: 09/23/2013 13:23

P5109 SDG#: PEL51-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
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	3.19	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0036 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
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	H132601AA	09/17/2013 14:59	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 14:59	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 08:32	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 17:58	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 17:58	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 17:58	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 17:58	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 17:58	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 17:58	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 17:58	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 17:58	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 17:58	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 17:58	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 17:58	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:42	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: WS-011(1.5-2.0)091513 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199376
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 11:05 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5110 SDG#: PEL51-10

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(1.5-2.0)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199376**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 11:05 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5110 SDG#: PEL51-10

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	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
GC/MS Semivolatiles SW-846 8270C SIM						
			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	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
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	31.8	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0071 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0841	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.20	0.0334	0.200	1

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

Sample Description: **WS-011(1.5-2.0)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199376**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 11:05 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5110 SDG#: PEL51-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
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	3.36	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
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	2.4 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	H132601AA	09/17/2013 15:20	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 15:20	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 09:01	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 18:01	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 18:01	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 18:01	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 18:01	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 18:01	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 18:01	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 18:01	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 18:01	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 18:01	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 18:01	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 18:01	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:44	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: WS-011(5.0-5.5)091513 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199377
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 11:15 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5111 SDG#: PEL51-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	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)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199377**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 11:15 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P51111 SDG#: PEL51-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B 25mL						
			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
GC/MS Semivolatiles SW-846 8270C SIM						
			ug/l	ug/l	ug/l	
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
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	31.8	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.103	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.19	0.0334	0.200	1

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

Sample Description: **WS-011(5.0-5.5)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199377**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 11:15 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P51111 SDG#: PEL51-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
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	3.36	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
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
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	H132601AA	09/17/2013 15:41	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 15:41	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 09:31	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 18:05	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 18:05	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 18:05	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 18:05	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 18:05	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 18:05	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 18:05	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 18:05	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 18:05	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 18:05	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 18:05	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:46	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: WS-018 (Surface) 091513 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199378
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 11:30 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5112 SDG#: PEL51-12

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	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) 091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199378**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 11:30 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5112 SDG#: PEL51-12

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	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
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
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.

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	30.6	0.033	0.20	1
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0588	0.00033	0.0050	1

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

Sample Description: WS-018 (Surface) 091513 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199378
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 11:30 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5112 SDG#: PEL51-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.93	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	3.23	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
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
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	H132601AA	09/17/2013 16:02	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 16:02	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 10:00	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 18:09	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 18:09	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 18:09	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 18:09	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 18:09	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 18:09	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 18:09	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 18:09	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 18:09	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 18:09	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 18:09	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:48	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1

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

Sample Description: WS-018 (Surface) 091513 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199378
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 11:30 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5112 SDG#: PEL51-12

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	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: **WS-003 (Surface) 091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199379**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 11:40 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5113 SDG#: PEL51-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	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-003 (Surface) 091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199379**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 11:40 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P51113 SDG#: PEL51-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
		purge				
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
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	0.011 J	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	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.

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	31.4	0.033	0.20	1
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0071 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0520	0.00033	0.0050	1

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

Sample Description: **WS-003 (Surface) 091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199379**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 11:40 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5113 SDG#: PEL51-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.10	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	3.33	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
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
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	H132601AA	09/17/2013 16:23	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 16:23	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 10:29	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 18:13	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 18:13	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 18:13	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 18:13	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 18:13	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 18:13	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 18:13	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 18:13	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 18:13	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 18:13	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 18:13	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:55	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1

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

Sample Description: WS-003 (Surface) 091513 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199379
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 11:40 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5113 SDG#: PEL51-13

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	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: WS-007(0.5-1.0)091513 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199380
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 11:50 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5114 SDG#: PEL51-14

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-007(0.5-1.0)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199380**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 11:50 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5114 SDG#: PEL51-14

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	
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
GC/MS Semivolatiles SW-846 8270C SIM						
			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	0.012 J	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
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	20.3	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0438	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.82	0.0334	0.200	1

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

Sample Description: **WS-007(0.5-1.0)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199380**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 11:50 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5114 SDG#: PEL51-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
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	2.01	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0019 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
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	H132601AA	09/17/2013 16:44	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 16:44	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 10:59	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 18:25	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 18:25	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 18:25	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 18:25	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 18:25	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 18:25	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 18:25	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 18:25	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 18:25	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 18:25	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 18:25	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:57	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: WS-001(0.5-1.0)091513 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199381
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 12:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5115 SDG#: PEL51-15

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-001(0.5-1.0)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199381**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 12:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5115 SDG#: PEL51-15

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	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
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.050	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.050	1
08357	Anthracene	120-12-7	N.D.	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.050	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.050	1
08357	Chrysene	218-01-9	N.D.	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.050	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.050	1
08357	Fluorene	86-73-7	N.D.	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.050	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.050	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.050	1
08357	Pyrene	129-00-0	N.D.	0.010	0.050	1

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.

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	29.8	0.033	0.20	1
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0385	0.00033	0.0050	1

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

Sample Description: **WS-001(0.5-1.0)091513 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199381**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 12:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5115 SDG#: PEL51-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.83	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	3.11	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
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
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	H132601AA	09/17/2013 17:05	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 17:05	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 11:29	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 18:29	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 18:29	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 18:29	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 18:29	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 18:29	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 18:29	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 18:29	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 18:29	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 18:29	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 18:29	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 18:29	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 06:59	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1

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

Sample Description: WS-001(0.5-1.0)091513 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199381
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013 12:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5115 SDG#: PEL51-15

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	13264807902A	09/21/2013 08:03	Yolunder Y Bunch	1

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

Sample Description: **WS-EB-62-091513 Grab Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199382**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 13:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5116 SDG#: PEL51-16EB

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	0.2 J	0.2	0.5	1

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

Sample Description: **WS-EB-62-091513 Grab Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199382**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 13:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P51116 SDG#: PEL51-16EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B 25mL purge						
02898	n-Propylbenzene	103-65-1	N.D.	0.1 ug/l	0.5 ug/l	1
02898	Styrene	100-42-5	N.D.	0.1 ug/l	0.5 ug/l	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1 ug/l	0.5 ug/l	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1 ug/l	0.5 ug/l	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1 ug/l	0.5 ug/l	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0 ug/l	5.0 ug/l	1
02898	Toluene	108-88-3	N.D.	0.1 ug/l	0.5 ug/l	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1 ug/l	0.5 ug/l	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1 ug/l	0.5 ug/l	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1 ug/l	0.5 ug/l	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1 ug/l	0.5 ug/l	1
02898	Trichloroethene	79-01-6	N.D.	0.1 ug/l	0.5 ug/l	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1 ug/l	0.5 ug/l	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3 ug/l	1.0 ug/l	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1 ug/l	0.5 ug/l	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1 ug/l	0.5 ug/l	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1 ug/l	0.5 ug/l	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1 ug/l	0.5 ug/l	1
GC/MS Semivolatiles SW-846 8270C SIM						
08357	Acenaphthene	83-32-9	N.D.	0.010 ug/l	0.051 ug/l	1
08357	Acenaphthylene	208-96-8	N.D.	0.010 ug/l	0.051 ug/l	1
08357	Anthracene	120-12-7	N.D.	0.010 ug/l	0.051 ug/l	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010 ug/l	0.051 ug/l	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010 ug/l	0.051 ug/l	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010 ug/l	0.051 ug/l	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010 ug/l	0.051 ug/l	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010 ug/l	0.051 ug/l	1
08357	Chrysene	218-01-9	N.D.	0.010 ug/l	0.051 ug/l	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010 ug/l	0.051 ug/l	1
08357	Fluoranthene	206-44-0	N.D.	0.010 ug/l	0.051 ug/l	1
08357	Fluorene	86-73-7	N.D.	0.010 ug/l	0.051 ug/l	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010 ug/l	0.051 ug/l	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010 ug/l	0.051 ug/l	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010 ug/l	0.051 ug/l	1
08357	Naphthalene	91-20-3	0.19	0.031 ug/l	0.051 ug/l	1
08357	Phenanthrene	85-01-8	N.D.	0.031 ug/l	0.051 ug/l	1
08357	Pyrene	129-00-0	N.D.	0.010 ug/l	0.051 ug/l	1
Metals SM 2340 B-1997						
06256	Total Hardness as CaCO3	471-34-1	N.D.	0.033 mg/l	0.20 mg/l	1
SW-846 6010B						
07035	Arsenic	7440-38-2	N.D.	0.0068 mg/l	0.0200 mg/l	1
07046	Barium	7440-39-3	N.D.	0.00033 mg/l	0.0050 mg/l	1
07049	Cadmium	7440-43-9	N.D.	0.00076 mg/l	0.0050 mg/l	1
01750	Calcium	7440-70-2	N.D.	0.0334 mg/l	0.200 mg/l	1

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

Sample Description: **WS-EB-62-091513 Grab Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199382**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013 13:00 by HV

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5116 SDG#: PEL51-16EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
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	N.D.	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
		SW-846 7470A	mg/l	mg/l	mg/l	
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	H132601AA	09/17/2013 10:27	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 10:27	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13260WAJ026	09/20/2013 11:58	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13260WAJ026	09/18/2013 09:30	Seth A Farrier	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132626256010	09/19/2013 13:00	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132591848003	09/18/2013 18:33	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132591848003	09/18/2013 18:33	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132591848003	09/18/2013 18:33	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132591848003	09/18/2013 18:33	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132591848003	09/18/2013 18:33	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132591848003	09/18/2013 18:33	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132591848003	09/18/2013 18:33	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132591848003	09/18/2013 18:33	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132591848003	09/18/2013 18:33	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132591848003	09/18/2013 18:33	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132591848003	09/18/2013 18:33	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132595713006	09/18/2013 07:01	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132591848003	09/17/2013 09:07	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132595713006	09/17/2013 16:30	Nelli S Markaryan	1

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

Sample Description: **WS-TB-150-091513 Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7199383**
 LL Group # **1419156**
 Account # **14739**

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

Collected: 09/15/2013

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5117 SDG#: PEL51-17TB*

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-TB-150-091513 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7199383
LL Group # 1419156
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/15/2013

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

Submitted: 09/16/2013 13:15

Reported: 09/23/2013 13:23

P5117 SDG#: PEL51-17TB*

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	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	H132601AA	09/17/2013 10:48	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132601AA	09/17/2013 10:48	Kerri E Legerlotz	1

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/23/13 at 01:23 PM

Group Number: 1419156

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: H132601AA	Sample number(s): 7199364-7199372, 7199374-7199383								
Acetone	N.D.	3.0	5.0	ug/l	84		60-139		
Allyl Chloride	N.D.	0.1	0.5	ug/l	83		61-130		
Benzene	N.D.	0.1	0.5	ug/l	94		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	103		73-128		
Bromomethane	N.D.	0.1	0.5	ug/l	87		62-126		
2-Butanone	N.D.	1.0	5.0	ug/l	84		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	94		80-120		
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	95		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	92		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	99		80-129		
Chlorobenzene	N.D.	0.1	0.5	ug/l	97		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	84		68-120		
Chloroform	N.D.	0.1	0.5	ug/l	96		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	79		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	95		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	88		64-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	98		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	97		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	94		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	99		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	97		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	77		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	94		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	94		80-123		
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	94		80-120		
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	97		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	102		75-145		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	97		80-120		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	94		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	95		75-122		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	97		80-121		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	96		80-123		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	93		80-120		
Ethyl ether	N.D.	0.1	0.5	ug/l	92		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	93		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	92		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	93		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: 09/23/13 at 01:23 PM

Group Number: 1419156

<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	95		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	93		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	96		80-120		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	94		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	94		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	93		80-120		
Styrene	N.D.	0.1	0.5	ug/l	97		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	98		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	95		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	98		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	83		65-131		
Toluene	N.D.	0.1	0.5	ug/l	94		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	93		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	97		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	97		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	96		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	100		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	91		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	99		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	95		80-120		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	95		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	83		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	96		80-120		

Batch number: 13260WAJ026

Sample number(s): 7199364-7199372, 7199374-7199382

Acenaphthene	N.D.	0.010	0.050	ug/l	93		77-118		
Acenaphthylene	N.D.	0.010	0.050	ug/l	94		80-123		
Anthracene	N.D.	0.010	0.050	ug/l	97		78-123		
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	92		73-127		
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	90		72-120		
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	98		79-136		
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	85		64-130		
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	92		73-131		
Chrysene	N.D.	0.010	0.050	ug/l	88		76-125		
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	83		58-131		
Fluoranthene	N.D.	0.010	0.050	ug/l	105		79-124		
Fluorene	N.D.	0.010	0.050	ug/l	96		74-115		
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	86		62-130		
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	111		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	92		75-120		
Pyrene	N.D.	0.010	0.050	ug/l	82		71-130		

Batch number: 132591848003

Sample number(s): 7199364-7199382

Arsenic	N.D.	0.0068	0.0200	mg/l	99		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	99		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	102		90-112		
Calcium	N.D.	0.0334	0.200	mg/l	100		90-110		
Chromium	N.D.	0.0016	0.0150	mg/l	99		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	102		88-110		
Magnesium	N.D.	0.0167	0.100	mg/l	101		90-110		
Nickel	N.D.	0.0015	0.0100	mg/l	103		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	99		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	91		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	100		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: 09/23/13 at 01:23 PM

Group Number: 1419156

<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: 132595713006 Mercury	Sample number(s): 7199364-7199382 N.D.	0.00006	0.00020	mg/l	94		80-120		
Batch number: 13264807902A HEM (oil & grease)	Sample number(s): 7199364-7199381 N.D.	1.4	5.0	mg/l	84	84	78-114	0	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: H132601AA	Sample number(s): 7199364-7199372, 7199374-7199383 UNSPK: 7199370								
Acetone	79	85	57-163	8	30				
Allyl Chloride	86	82	56-160	5	30				
Benzene	88	92	87-126	5	30				
Bromobenzene	93	94	80-123	1	30				
Bromochloromethane	100	92	82-125	8	30				
Bromodichloromethane	90	92	82-133	2	30				
Bromoform	105	105	60-138	0	30				
Bromomethane	83	90	66-130	8	30				
2-Butanone	78	83	56-160	6	30				
n-Butylbenzene	88	92	83-131	4	30				
sec-Butylbenzene	90	93	84-128	3	30				
tert-Butylbenzene	88	93	84-135	5	30				
Carbon Tetrachloride	96	103	81-148	6	30				
Chlorobenzene	95	97	78-133	2	30				
Chloroethane	83	89	70-139	7	30				
Chloroform	92	94	86-136	3	30				
Chloromethane	77	84	49-135	9	30				
2-Chlorotoluene	91	92	75-134	1	30				
4-Chlorotoluene	89	92	76-134	4	30				
1,2-Dibromo-3-chloropropane	89	100	43-143	12	30				
Dibromochloromethane	95	97	79-125	2	30				
1,2-Dibromoethane	94	96	84-127	3	30				
Dibromomethane	90	91	83-126	1	30				
1,2-Dichlorobenzene	95	97	83-117	2	30				
1,3-Dichlorobenzene	93	95	79-132	2	30				
1,4-Dichlorobenzene	94	96	79-120	3	30				
Dichlorodifluoromethane	78	85	28-136	8	30				
1,1-Dichloroethane	88	92	88-136	5	30				
1,2-Dichloroethane	93	96	82-135	2	30				
1,1-Dichloroethene	91	97	83-150	6	30				
cis-1,2-Dichloroethene	88	93	82-129	5	30				
trans-1,2-Dichloroethene	93	98	88-127	5	30				
Dichlorofluoromethane	101	109	81-161	8	30				
1,2-Dichloropropane	91	94	91-126	3	30				
1,3-Dichloropropane	90	91	80-127	1	30				
2,2-Dichloropropane	92	96	80-134	4	30				
1,1-Dichloropropene	95	98	86-139	4	30				

*- 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: 09/23/13 at 01:23 PM

Group Number: 1419156

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 RPD</u> <u>Max</u>
cis-1,3-Dichloropropene	91	94	74-132	3	30				
trans-1,3-Dichloropropene	90	90	71-128	1	30				
Ethyl ether	87	86	57-139	1	30				
Ethylbenzene	91	94	80-140	3	30				
Freon 113	90	94	77-147	4	30				
Hexachlorobutadiene	90	92	65-128	2	30				
Isopropylbenzene	94	97	81-133	4	30				
p-Isopropyltoluene	87	91	84-124	5	30				
Methyl Tertiary Butyl Ether	88	90	82-132	2	30				
4-Methyl-2-Pentanone	92	92	69-149	0	30				
Methylene Chloride	90	90	77-135	1	30				
n-Propylbenzene	89	92	79-131	3	30				
Styrene	95	97	63-151	2	30				
1,1,1,2-Tetrachloroethane	96	97	87-126	1	30				
1,1,2,2-Tetrachloroethane	93	94	75-131	1	30				
Tetrachloroethene	94	99	75-129	6	30				
Tetrahydrofuran	75	81	56-154	8	30				
Toluene	90	94	83-127	5	30				
1,2,3-Trichlorobenzene	88	92	73-125	5	30				
1,2,4-Trichlorobenzene	91	94	77-120	3	30				
1,1,1-Trichloroethane	94	99	85-140	5	30				
1,1,2-Trichloroethane	92	95	85-129	3	30				
Trichloroethene	95	98	85-131	3	30				
Trichlorofluoromethane	93	102	73-139	9	30				
1,2,3-Trichloropropane	97	99	76-120	2	30				
1,2,4-Trimethylbenzene	89	92	87-126	4	30				
1,3,5-Trimethylbenzene	89	92	89-129	3	30				
Vinyl Chloride	83	90	62-135	9	30				
Xylene (Total)	92	96	81-137	4	30				

Batch number: 13260WAJ026 Sample number(s): 7199364-7199372,7199374-7199382 UNSPK: 7199370

Acenaphthene	83	88	47-136	6	30				
Acenaphthylene	89	94	33-146	6	30				
Anthracene	54*	56*	69-119	5	30				
Benzo(a)anthracene	72	77	37-150	7	30				
Benzo(a)pyrene	41*	45*	64-123	11	30				
Benzo(b)fluoranthene	71	75	33-152	7	30				
Benzo(g,h,i)perylene	61	65	36-138	8	30				
Benzo(k)fluoranthene	67	71	31-142	7	30				
Chrysene	74	79	34-135	9	30				
Dibenz(a,h)anthracene	70	75	17-134	8	30				
Fluoranthene	94	99	39-147	6	30				
Fluorene	92	97	38-149	6	30				
Indeno(1,2,3-cd)pyrene	67	70	29-143	4	30				
1-Methylnaphthalene	105	110	49-152	7	30				
2-Methylnaphthalene	101	107	51-146	7	30				
Naphthalene	96	101	58-131	7	30				
Phenanthrene	86	91	48-140	7	30				
Pyrene	73	77	59-125	6	30				

Batch number: 132591848003 Sample number(s): 7199364-7199382 UNSPK: 7199370 BKG: 7199370
Arsenic 98 99 81-123 1 20 0.0077 J 0.0073 J 5 (1) 20

*- Outside of specification

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Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/23/13 at 01:23 PM

Group Number: 1419156

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	102	100	78-118	1	20	0.0494	0.0497	1	20
Cadmium	102	101	83-116	2	20	N.D.	N.D.	0 (1)	20
Calcium	99	94	81-118	2	20	7.04	6.98	1	20
Chromium	102	100	81-120	2	20	N.D.	N.D.	0 (1)	20
Lead	101	101	75-125	0	20	N.D.	N.D.	0 (1)	20
Magnesium	98	94	75-125	2	20	3.23	3.19	1	20
Nickel	103	102	86-115	1	20	N.D.	N.D.	0 (1)	20
Selenium	99	99	75-125	0	20	N.D.	N.D.	0 (1)	20
Silver	94	91	75-125	3	20	N.D.	N.D.	0 (1)	20
Vanadium	101	101	90-111	0	20	N.D.	N.D.	0 (1)	20
Batch number: 132595713006	Sample number(s): 7199364-7199382 UNSPK: 7199370 BKG: 7199370								
Mercury	96	97	80-120	1	20	N.D.	N.D.	0 (1)	20
Batch number: 13264807902A	Sample number(s): 7199364-7199381 UNSPK: 7199370 BKG: 7199370								
HEM (oil & grease)	34*	43*	78-114	30*	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: H132601AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7199364	101	99	99	98
7199365	101	98	99	99
7199366	101	102	99	99
7199367	101	99	99	98
7199368	101	101	99	98
7199369	101	98	99	99
7199370	100	99	99	99
7199371	101	99	98	100
7199372	102	102	99	100
7199374	101	101	98	99
7199375	101	100	98	98
7199376	102	101	99	99
7199377	101	101	99	98
7199378	101	100	98	99
7199379	101	101	99	98
7199380	100	100	98	98
7199381	101	102	99	98
7199382	101	102	99	99
7199383	100	100	99	99
Blank	100	101	99	99
LCS	101	100	100	100
MS	101	99	98	100
MSD	102	102	99	100

*- Outside of specification

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Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/23/13 at 01:23 PM

Group Number: 1419156

Surrogate Quality Control

Limits:	77-114	74-113	77-110	78-110
Analysis Name: PAHs in waters by SIM				
Batch number: 13260WAJ026				
	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10	
7199364	102	70	111	
7199365	102	71	110	
7199366	103	71	113	
7199367	106	78	113	
7199368	104	77	111	
7199369	105	73	112	
7199370	99	51*	113	
7199371	105	72	114	
7199372	109	72	117	
7199374	102	74	111	
7199375	105	75	112	
7199376	107	74	111	
7199377	105	70	111	
7199378	101	61*	106	
7199379	90	42*	106	
7199380	97	71	109	
7199381	102	60*	111	
7199382	107	99	108	
Blank	106	103	109	
LCS	114	111	119	
MS	105	72	114	
MSD	109	72	117	
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 # 1419156 Sample # 7199364-83

Instructions on reverse side correspond with circled numbers.

2 of 3

1 Client Information				4 Matrix				5 Analyses Requested								6	
Facility #/SID <u>Mayflower Pipeline Incident</u>				Sediment <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Soil <input type="checkbox"/>	Ground <input type="checkbox"/> Surface <input checked="" type="checkbox"/>	Air <input type="checkbox"/>	Preservation Code								SCR#: _____		
Site Address <u>Mayflower, AR</u>							H H H H H H H H H H N N N N N N N N N N S S S S S S S S S S								Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other		
ExxonMobil PM <u>Scott Bushroe</u>		Cost Center/AFE		Water <input type="checkbox"/>	Oil <input type="checkbox"/>	Total # of Containers	VOCs 8260 B PAH 8210 SIM RCRA Metals ^{Thiosulfate} N, V, Cr, Mg Diss Metals HEM Oil Grease								6 Remarks		
Consultant/Office <u>ARCADIS</u>		Consultant Phone # <u>919 302 6799</u>					Grab <input type="checkbox"/> Composite <input type="checkbox"/>										
Sampler <u>Hans Van Aller/Dave Drost/Ryan Lewis</u>																	
2 Sample Identification		Collected															
		Date	Time														
<u>WS-003 (Surface) 091413</u>		<u>9-14-13</u>	<u>1130</u>														
<u>WS-007 (0.5-1.0) 091413</u>		<u>9-14-13</u>	<u>1140</u>														
<u>WS-001 (0.5-1.0) 091413</u>		<u>9-14-13</u>	<u>1150</u>														
<u>WS-EB-61-091413</u>		<u>9-14-13</u>	<u>1230</u>														
<u>DWP-WS-87-091413</u>		<u>9-14-13</u>	<u>—</u>														
<u>WS-014 (1.5-2.0) 091513</u>		<u>9-15-13</u>	<u>0850</u>														
<u>WS-014 (5.5-6.0) 091513</u>		<u>9-15-13</u>	<u>0900</u>														
<u>WS-012 (1.5-2.0) 091513</u>		<u>9-15-13</u>	<u>0920</u>														
<u>WS-012 (5.0-5.5) 091513</u>		<u>9-15-13</u>	<u>0930</u>														
<u>WS-010 (1.5-2.0) 091513</u>		<u>9-15-13</u>	<u>0940</u>														
<u>WS-010 (3.5-4.0) 091513</u>		<u>9-15-13</u>	<u>0950</u>														
<u>WS-006 (0.5-1.0) 091513</u>		<u>9-15-13</u>	<u>1000</u>														
7 Turnaround Time Requested (TAT) (please circle)				Relinquished by <u>D.D.</u>				Date <u>9.15.13</u> Time <u>1700</u>		Received by		Date		Time			
Standard <u>5 day</u> 4 day				Relinquished by				Date		Time		Received by		Date		Time	
72 hour 48 hour 24 hour				Relinquished by				Date		Time		Received by		Date		Time	
8 Data Package (circle if required)				Relinquished by Commercial Carrier				Date		Time		Received by		Date		Time	
Type I - Full				UPS _____ FedEx _____ Other <u>Southwest</u>				Date		Time		Received by <u>Annelise H. Owen</u>		Date <u>9/16/13</u>		Time <u>1315</u>	
Type VI (Raw Data)				Temperature Upon Receipt <u>0.5-4.0°C</u>				Date		Time		Custody Seals Intact? <u>Yes</u> No		Date		Time	
NJ Reduced																	
Other _____																	

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

7053 0713

ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only

Group # 1419156

Sample # 7199364-83

3 of 3

Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix				5 Analyses Requested								6	
Facility #/SID <u>Mayflower Pipeline Incident</u>				Soil <input type="checkbox"/>	Water <input type="checkbox"/>	Oil <input type="checkbox"/>	Total # of Containers	Preservation Code								SCR#: _____ Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other	
Site Address <u>Mayflower, AR</u>								Sediment <input type="checkbox"/>	Potable <input type="checkbox"/>	Ground <input type="checkbox"/>	Surface <input checked="" type="checkbox"/>	H	H	H			
ExxonMobil PM <u>Scott Bushroe</u>		Cost Center/AFE															
Consultant/Office <u>ARCADIS</u>																	
Consultant PM <u>Steve Barrick</u>		Consultant Phone # <u>919 302 6799</u>															
Sampler <u>Hans Van Aller / Dave Drost / Ryan Lewis</u>																Remarks	
2 Sample Identification		3 Collected		Grab	Composite												
Date	Time																
<u>WS-005 (surface) 091513</u>	<u>9-15-13</u>	<u>1035</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		9	X	X	X	X	X	X				
<u>WS-002 (surface) 091513</u>	<u>9-15-13</u>	<u>1050</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		9	X	X	X	X	X	X				
<u>WS-011 (1.5-2.0) 091513</u>	<u>9-15-13</u>	<u>1105</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		9	X	X	X	X	X	X				
<u>WS-011 (8.0-9.5) 091513</u>	<u>9-15-13</u>	<u>1115</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		9	X	X	X	X	X	X				
<u>WS-018 (surface) 091513</u>	<u>9-15-13</u>	<u>1130</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		9	X	X	X	X	X	X				
<u>WS-003 (surface) 091513</u>	<u>9-15-13</u>	<u>1140</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		9	X	X	X	X	X	X				
<u>WS-007 (0.5-1.0) 091513</u>	<u>9-15-13</u>	<u>1150</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		9	X	X	X	X	X	X				
<u>WS-001 (0.5-1.0) 091513</u>	<u>9-15-13</u>	<u>1200</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		9	X	X	X	X	X	X				
<u>WS-006 (0.5-1.0) 091513 MS/MSD</u>	<u>9-15-13</u>	<u>1000</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		18	X	X	X	X	X	X			<u>MS/MSD</u>	
<u>WS-EB-62-091513</u>	<u>9-15-13</u>	<u>1300</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		7	X	X	X	X						
<u>WS-TB-150-091513</u>	<u>9-15-13</u>	<u>—</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		2	X									

7 Turnaround Time Requested (TAT) (please circle) Standard <u>5 day</u> 4 day 72 hour 48 hour 24 hour	Relinquished by <u>B.A. Dow</u>	Date <u>9.15.13</u>	Time <u>1400</u>	Received by	Date	Time
	Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time	
Relinquished by Commercial Carrier	UPS	FedEx	Other <u>Southwest</u>	Received by <u>Annalise H. Owen</u>	Date <u>9/16/13</u>	Time <u>1315</u>
Temperature Upon Receipt <u>0.5-4.0 °C</u>				Custody Seals Intact? <u>Yes</u> No		

Environmental Sample Administration
Receipt Documentation Log

Grp #1419156

Client/Project: XOM-Mayflower
 Date of Receipt: 9/16/13
 Time of Receipt: 1315
 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	DT146	4.0	TB	WI	Y	B	
2	↓	0.9	↓	↓	↓	↓	
3		0.5					
4		3.7					
5		0.8					
6		0.6					

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: 9/16/13 1330

Environmental Sample Administration
Receipt Documentation Log

Client/Project: XOM - Mayflower
 Date of Receipt: 9/16/13
 Time of Receipt: 1315
 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
27	DT146	0.7	TB	WI	Y	B	
28	↓	1.9	↓	↓	↓	↓	
29	↓	1.1	↓	↓	↓	↓	
40	↓	1.0	↓	↓	↓	↓	
41	↓	0.6	↓	↓	↓	↓	
6	_____						

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: Annelise H. Owen / 210 Date/Time: 9/16/13 1330

Explanation of Symbols and Abbreviations

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

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