

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

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

September 05, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 08/29/2013

Group Number: 1415030

SDG: PEL11

PO Number: B0086003.1301

State of Sample Origin: AR

Client Sample DescriptionLancaster Labs (LL) #

WS-014(1.5-2.0)082813 Grab Surface Water	7179092
WS-014(5.5-6.0)082813 Grab Surface Water	7179093
WS-012(1.5-2.0)082813 Grab Surface Water	7179094
WS-012(5.0-5.5)082813 Grab Surface Water	7179095
WS-010(1.5-2.0)082813 Grab Surface Water	7179096
WS-010(3.5-4.0)082813 Grab Surface Water	7179097
WS-006(0.5-1.0)082813 Grab Surface Water	7179098
WS-006(0.5-1.0)082813MS Grab Surface Water	7179099
WS-006(0.5-1.0)082813MSD Grab Surface Water	7179100
WS-006(0.5-1.0)082813DUP Grab Surface Water	7179101
WS-005(Surface)082813 Grab Surface Water	7179102
WS-002(Surface)082813 Grab Surface Water	7179103
WS-018(Surface)082813 Grab Surface Water	7179104
WS-011(1.5-2.0)082813 Grab Surface Water	7179105
WS-011(5.0-5.5)082813 Grab Surface Water	7179106
WS-003(Surface)082813 Grab Surface Water	7179107
WS-007(0.5-1.0)082813 Grab Surface Water	7179108
WS-001(0.5-1.0)082813 Grab Surface Water	7179109
DUP-WS-78-082813 Grab Surface Water	7179110
WS-EB-044-082813 Grab Water	7179111
WS-TB-135-082813 Water	7179112

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

ELECTRONIC ARCADIS
COPY TO
ELECTRONIC ARCADIS

Attn: Stephen Barrick

Attn: Lyndi Mott

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

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1415030

General Comments:

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

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

Project specific QC samples are included in this data set

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

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

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

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

Batch #: H132421AA (Sample number(s): 7179092-7179100, 7179102-7179112 UNSPK: 7179098)

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: 1,2,3-Trichloropropane

SW-846 8270C SIM, GC/MS Semivolatiles

Batch #: 13241WAJ026 (Sample number(s): 7179092-7179100, 7179102-7179111 UNSPK: 7179098)

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

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

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7179093, 7179094, 7179095, 7179096, 7179097, 7179098, 7179099, 7179100, 7179104, 7179107, 7179109, 7179110, MS, MSD

Sample #s: 7179093, 7179094, 7179095, 7179096, 7179097, 7179104, 7179107, 7179109, 7179110

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 #: 13247807901A (Sample number(s): 7179092-7179110 UNSPK: 7179098 BKG: 7179098)

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

Sample Description: WS-014(1.5-2.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179092
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 09:20 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28141 SDG#: PEL11-01

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)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179092
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 09:20 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28141 SDG#: PEL11-01

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	0.011 J	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	0.074	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	0.053	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	0.058	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	27.3	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	0.0329	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.28	0.0334	0.200	1

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

Sample Description: WS-014(1.5-2.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179092
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 09:20 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28141 SDG#: PEL11-01

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	2.81	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	H132421AA	08/30/2013 11:59	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 11:59	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13241WAJ026	09/01/2013 06:52	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13241WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 19:23	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 12:14	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 19:23	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 19:23	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 19:23	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 19:23	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 19:23	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 19:23	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 19:23	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 19:23	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 19:23	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 09:23	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

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

Sample Description: WS-014(5.5-6.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179093
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 09:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28142 SDG#: PEL11-02

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	0.4 J	0.2	0.5	1

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

Sample Description: WS-014(5.5-6.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179093
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 09:30 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/29/2013 09:25

Highlands Ranch CO 80129

Reported: 09/05/2013 13:58

28142 SDG#: PEL11-02

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
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	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	28.1	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0094 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0334	0.00033	0.0050	1

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

Sample Description: WS-014(5.5-6.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179093
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 09:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28142 SDG#: PEL11-02

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	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.48	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.89	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0018 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	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.	4.6 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	H132421AA	08/30/2013 12:20	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 12:20	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132411WAJ026	09/01/2013 07:22	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	132411WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 19:26	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 12:25	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 19:26	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 19:26	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 19:26	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 19:26	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 19:26	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 19:26	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 19:26	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 19:26	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 19:26	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 09:25	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1

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

Sample Description: WS-014(5.5-6.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179093
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 09:30 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/29/2013 09:25

Highlands Ranch CO 80129

Reported: 09/05/2013 13:58

28142 SDG#: PEL11-02

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	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

Sample Description: WS-012(1.5-2.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179094
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 09:45 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28121 SDG#: PEL11-03

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)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179094
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 09:45 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28121 SDG#: PEL11-03

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.	0.011	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 CaCO ₃	471-34-1	28.6	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.0099 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0287	0.00033	0.0050	1

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

Sample Description: WS-012(1.5-2.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179094
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 09:45 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28121 SDG#: PEL11-03

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	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.59	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.95	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	H132421AA	08/30/2013 12:41	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 12:41	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13241WAJ026	09/01/2013 07:51	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13241WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 19:38	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 12:29	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 19:38	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 19:38	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 19:38	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 19:38	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 19:38	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 19:38	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 19:38	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 19:38	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 19:38	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 09:27	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1

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

Sample Description: WS-012(1.5-2.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179094
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 09:45 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/29/2013 09:25

Highlands Ranch CO 80129

Reported: 09/05/2013 13:58

28121 SDG#: PEL11-03

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	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

Sample Description: WS-012(5.0-5.5)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179095
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 09:55 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28122 SDG#: PEL11-04

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)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179095
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 09:55 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28122 SDG#: PEL11-04

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.	0.010	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 CaCO ₃	471-34-1	28.7	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	0.0417	0.00033	0.0050	1

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

Sample Description: WS-012(5.0-5.5)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179095
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 09:55 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28122 SDG#: PEL11-04

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	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.65	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.94	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	H132421AA	08/30/2013 13:02	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 13:02	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132411WAJ026	09/01/2013 08:21	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	132411WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 19:41	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 12:33	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 19:41	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 19:41	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 19:41	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 19:41	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 19:41	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 19:41	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 19:41	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 19:41	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 19:41	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 09:29	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1

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

Sample Description: WS-012(5.0-5.5)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179095
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 09:55 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/29/2013 09:25

Highlands Ranch CO 80129

Reported: 09/05/2013 13:58

28122 SDG#: PEL11-04

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	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

Sample Description: WS-010(1.5-2.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179096
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:10 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28101 SDG#: PEL11-05

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

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

Sample Description: WS-010(1.5-2.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179096
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:10 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28101 SDG#: PEL11-05

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.	0.010	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 CaCO ₃	471-34-1	28.4	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.0122 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0898	0.00033	0.0050	1

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

Sample Description: WS-010(1.5-2.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179096
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:10 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28101 SDG#: PEL11-05

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	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.58	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.91	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	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	H132421AA	08/30/2013 13:22	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 13:22	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13241WAJ026	09/01/2013 08:50	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13241WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 19:45	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 12:37	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 19:45	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 19:45	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 19:45	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 19:45	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 19:45	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 19:45	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 19:45	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 19:45	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 19:45	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 09:31	Damary Valentini	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1

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

Sample Description: WS-010(1.5-2.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179096
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:10 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28101 SDG#: PEL11-05

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	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

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

Sample Description: WS-010(3.5-4.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179097
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:20 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28102 SDG#: PEL11-06

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

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

Sample Description: WS-010(3.5-4.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179097
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:20 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28102 SDG#: PEL11-06

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	0.1 J	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
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 CaCO ₃	471-34-1	30.0	0.033	0.20	1
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0110 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.436	0.00033	0.0050	1

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

Sample Description: WS-010(3.5-4.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179097
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:20 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28102 SDG#: PEL11-06

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	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.02	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	3.03	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0018 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	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.	3.6 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	H132421AA	08/30/2013 13:43	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 13:43	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13241WAJ026	09/01/2013 09:20	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13241WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 19:49	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 12:40	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 19:49	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 19:49	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 19:49	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 19:49	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 19:49	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 19:49	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 19:49	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 19:49	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 19:49	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 09:33	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1

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

Sample Description: WS-010(3.5-4.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179097
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:20 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/29/2013 09:25

Highlands Ranch CO 80129

Reported: 09/05/2013 13:58

28102 SDG#: PEL11-06

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	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

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

Sample Description: WS-006(0.5-1.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179098
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2806- SDG#: PEL11-07BKG

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

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

Sample Description: WS-006(0.5-1.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179098
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2806- SDG#: PEL11-07BKG

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.	0.010	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	28.7	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.0098 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0513	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.59	0.0334	0.200	1

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

Sample Description: WS-006(0.5-1.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179098
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2806- SDG#: PEL11-07BKG

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	
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	2.97	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	H132421AA	08/30/2013 14:04	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 14:04	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13241WAJ026	09/01/2013 05:23	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13241WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 19:00	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 11:51	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 19:00	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 19:00	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 19:00	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 19:00	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 19:00	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 19:00	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 19:00	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 19:00	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 19:00	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 09:35	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

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

Sample Description: WS-006(0.5-1.0)082813MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179099
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2806- SDG#: PEL11-07MS

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	44	3.0	5.0	1
02898	Allyl Chloride	107-05-1	5.4	0.1	0.5	1
02898	Benzene	71-43-2	5.1	0.1	0.5	1
02898	Bromobenzene	108-86-1	5.4	0.1	0.5	1
02898	Bromochloromethane	74-97-5	5.6	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	5.5	0.1	0.5	1
02898	Bromoform	75-25-2	5.5	0.1	0.5	1
02898	Bromomethane	74-83-9	4.8	0.1	0.5	1
02898	2-Butanone	78-93-3	39	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	5.5	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	5.4	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	5.5	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	6.1	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.4	0.1	0.5	1
02898	Chloroethane	75-00-3	4.9	0.1	0.5	1
02898	Chloroform	67-66-3	5.7	0.1	0.5	1
02898	Chloromethane	74-87-3	4.7	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.4	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.5	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	5.1	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	5.6	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	5.4	0.1	0.5	1
02898	Dibromomethane	74-95-3	5.1	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.6	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.6	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.6	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	4.1	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.5	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	5.9	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	5.4	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	5.0	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	5.4	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	5.8	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.3	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	5.3	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	5.9	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	5.6	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	4.9	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	5.4	0.1	0.5	1
02898	Ethyl ether	60-29-7	5.9	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.2	0.1	0.5	1
02898	Freon 113	76-13-1	5.4	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	5.1	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	5.3	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	5.3	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	5.0	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	29	1.0	5.0	1
02898	Methylene Chloride	75-09-2	5.1	0.2	0.5	1

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

Sample Description: WS-006(0.5-1.0)082813MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179099
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2806- SDG#: PEL11-07MS

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	5.5	0.1	0.5	1
02898	Styrene	100-42-5	5.5	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	5.6	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	5.8	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	5.3	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	22	2.0	5.0	1
02898	Toluene	108-88-3	5.3	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	4.3	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	5.8	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	5.6	0.1	0.5	1
02898	Trichloroethene	79-01-6	5.3	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	5.7	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	6.1	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	5.6	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	5.5	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	5.0	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	16	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	0.76	0.010	0.051	1
08357	Acenaphthylene	208-96-8	1.2	0.010	0.051	1
08357	Anthracene	120-12-7	0.064	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.56	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.20	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.87	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.71	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.76	0.010	0.051	1
08357	Chrysene	218-01-9	0.86	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	0.86	0.010	0.051	1
08357	Fluoranthene	206-44-0	1.1	0.010	0.051	1
08357	Fluorene	86-73-7	1.1	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.83	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	1.2	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	1.1	0.010	0.051	1
08357	Naphthalene	91-20-3	1.1	0.030	0.051	1
08357	Phenanthrene	85-01-8	1.1	0.030	0.051	1
08357	Pyrene	129-00-0	0.56	0.010	0.051	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	45.2	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.145	0.0068	0.0200	1
07046	Barium	7440-39-3	1.90	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0457	0.00076	0.0050	1
01750	Calcium	7440-70-2	10.2	0.0334	0.200	1

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

Sample Description: WS-006(0.5-1.0)082813MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179099
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2806- SDG#: PEL11-07MS

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	0.187	0.0016	0.0150	1
07055	Lead	7439-92-1	0.136	0.0047	0.0150	1
01757	Magnesium	7439-95-4	4.78	0.0167	0.100	1
07061	Nickel	7440-02-0	0.470	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.131	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0532	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.479	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.	27.1	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	H132421AA	08/30/2013 14:25	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 14:25	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13241WAJ026	09/01/2013 05:53	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13241WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 19:11	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 12:03	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 19:11	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 19:11	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 19:11	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 19:11	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 19:11	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 19:11	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 19:11	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 19:11	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 19:11	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 09:39	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

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

Sample Description: WS-006(0.5-1.0)082813MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179100
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2806- SDG#: PEL11-07MSD

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	46	3.0	5.0	1
02898	Allyl Chloride	107-05-1	5.1	0.1	0.5	1
02898	Benzene	71-43-2	5.3	0.1	0.5	1
02898	Bromobenzene	108-86-1	5.6	0.1	0.5	1
02898	Bromochloromethane	74-97-5	5.2	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	5.9	0.1	0.5	1
02898	Bromoform	75-25-2	5.7	0.1	0.5	1
02898	Bromomethane	74-83-9	4.7	0.1	0.5	1
02898	2-Butanone	78-93-3	42	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	5.5	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	5.4	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	5.4	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	6.2	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.7	0.1	0.5	1
02898	Chloroethane	75-00-3	4.9	0.1	0.5	1
02898	Chloroform	67-66-3	5.9	0.1	0.5	1
02898	Chloromethane	74-87-3	4.7	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.5	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.6	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	5.9	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	5.7	0.1	0.5	1
02898	Dibromomethane	74-95-3	5.5	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.7	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.6	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.6	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	4.1	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.6	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	6.2	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	5.5	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	5.2	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	5.5	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	5.6	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.7	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	5.7	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	6.0	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	5.8	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	5.4	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	5.8	0.1	0.5	1
02898	Ethyl ether	60-29-7	5.8	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.5	0.1	0.5	1
02898	Freon 113	76-13-1	5.4	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	5.0	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	5.6	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	5.4	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	5.2	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	31	1.0	5.0	1
02898	Methylene Chloride	75-09-2	5.2	0.2	0.5	1

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

Sample Description: WS-006(0.5-1.0)082813MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179100
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2806- SDG#: PEL11-07MSD

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	n-Propylbenzene	103-65-1	5.6	0.1	0.5	1
02898	Styrene	100-42-5	5.8	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	6.0	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	5.8	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	5.6	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	25	2.0	5.0	1
02898	Toluene	108-88-3	5.7	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	4.5	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	4.8	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	6.1	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	5.9	0.1	0.5	1
02898	Trichloroethene	79-01-6	5.6	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	5.4	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	6.0	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	5.6	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	5.6	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	4.8	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	17	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	0.75	0.010	0.052	1
08357	Acenaphthylene	208-96-8	1.2	0.010	0.052	1
08357	Anthracene	120-12-7	0.043 J	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	0.56	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	0.17	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	0.89	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	0.70	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	0.79	0.010	0.052	1
08357	Chrysene	218-01-9	0.89	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	0.89	0.010	0.052	1
08357	Fluoranthene	206-44-0	1.1	0.010	0.052	1
08357	Fluorene	86-73-7	1.1	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.85	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	1.2	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	1.2	0.010	0.052	1
08357	Naphthalene	91-20-3	1.1	0.031	0.052	1
08357	Phenanthrene	85-01-8	1.1	0.031	0.052	1
08357	Pyrene	129-00-0	0.54	0.010	0.052	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	44.3	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.147	0.0068	0.0200	1
07046	Barium	7440-39-3	1.88	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0456	0.00076	0.0050	1
01750	Calcium	7440-70-2	10.0	0.0334	0.200	1

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

Sample Description: WS-006(0.5-1.0)082813MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179100
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2806- SDG#: PEL11-07MSD

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	0.184	0.0016	0.0150	1
07055	Lead	7439-92-1	0.137	0.0047	0.0150	1
01757	Magnesium	7439-95-4	4.66	0.0167	0.100	1
07061	Nickel	7440-02-0	0.467	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.133	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0527	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.470	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.	31.6	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	H132421AA	08/30/2013 14:45	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 14:45	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13241WAJ026	09/01/2013 06:22	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13241WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 19:15	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 12:07	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 19:15	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 19:15	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 19:15	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 19:15	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 19:15	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 19:15	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 19:15	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 19:15	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 19:15	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 09:41	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

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

Sample Description: WS-006(0.5-1.0)082813DUP Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179101
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 10:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2806- SDG#: PEL11-07DUP

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 CaCO ₃	471-34-1	28.2	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	0.0500	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.47	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.93	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		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 CaCO ₃	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 19:07	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 11:59	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 19:07	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 19:07	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 19:07	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 19:07	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 19:07	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 19:07	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 19:07	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 19:07	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 19:07	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 09:37	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

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

Sample Description: WS-005(Surface)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179102
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 11:15 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28-05 SDG#: PEL11-08

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

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

Sample Description: WS-005(Surface)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179102
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 11:15 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28-05 SDG#: PEL11-08

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	0.1 J	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
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	29.9	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.0108 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0432	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.22	0.0334	0.200	1

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

Sample Description: WS-005(Surface)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179102
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 11:15 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28-05 SDG#: PEL11-08

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	2.88	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		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	H132421AA	08/30/2013 15:27	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 15:27	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13241WAJ026	09/01/2013 09:50	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13241WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 19:53	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 12:44	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 19:53	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 19:53	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 19:53	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 19:53	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 19:53	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 19:53	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 19:53	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 19:53	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 19:53	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 09:47	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

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

Sample Description: WS-002(Surface)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179103
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 11:35 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2802- SDG#: PEL11-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL purge	ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	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)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179103
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 11:35 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2802- SDG#: PEL11-09

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	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	28.7	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	0.0226	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.59	0.0334	0.200	1

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

Sample Description: WS-002(Surface)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179103
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 11:35 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2802- SDG#: PEL11-09

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	2.97	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	H132421AA	08/30/2013 15:48	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 15:48	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13241WAJ026	09/01/2013 10:19	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13241WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 19:57	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 12:48	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 19:57	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 19:57	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 19:57	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 19:57	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 19:57	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 19:57	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 19:57	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 19:57	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 19:57	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 09:49	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

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

Sample Description: WS-018(Surface)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179104
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 13:05 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28-18 SDG#: PEL11-10

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

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

Sample Description: WS-018(Surface)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179104
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 13:05 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28-18 SDG#: PEL11-10

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.	0.010	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
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 CaCO ₃	471-34-1	27.6	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	0.0598	0.00033	0.0050	1

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

Sample Description: WS-018(Surface)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179104
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 13:05 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28-18 SDG#: PEL11-10

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	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.28	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.90	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.	2.8 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	H132421AA	08/30/2013 16:09	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 16:09	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13241WAJ026	09/01/2013 10:49	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13241WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 20:00	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 12:52	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 20:00	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 20:00	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 20:00	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 20:00	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 20:00	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 20:00	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 20:00	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 20:00	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 20:00	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 09:51	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1

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

Sample Description: WS-018(Surface)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179104
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 13:05 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/29/2013 09:25

Highlands Ranch CO 80129

Reported: 09/05/2013 13:58

28-18 SDG#: PEL11-10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

Sample Description: WS-011(1.5-2.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179105
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 12:00 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28111 SDG#: PEL11-11

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

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

Sample Description: WS-011(1.5-2.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179105
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 12:00 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28111 SDG#: PEL11-11

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	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	28.1	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.0093 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0160	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.40	0.0334	0.200	1

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

Sample Description: WS-011(1.5-2.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179105
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 12:00 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

281111 SDG#: PEL11-11

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	2.94	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	H132421AA	08/30/2013 16:30	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 16:30	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13241WAJ026	09/01/2013 11:19	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13241WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 20:04	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 12:56	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 20:04	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 20:04	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 20:04	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 20:04	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 20:04	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 20:04	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 20:04	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 20:04	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 20:04	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 09:53	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

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

Sample Description: WS-011(5.0-5.5)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179106
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 12:10 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28112 SDG#: PEL11-12

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-011(5.0-5.5)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179106
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 12:10 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28112 SDG#: PEL11-12

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	0.051	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	28.1	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.0107 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0189	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.40	0.0334	0.200	1

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

Sample Description: WS-011(5.0-5.5)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179106
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 12:10 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28112 SDG#: PEL11-12

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	
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	2.94	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	H132421AA	08/30/2013 16:51	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 16:51	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13241WAJ026	09/01/2013 11:49	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13241WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 20:08	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 12:59	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 20:08	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 20:08	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 20:08	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 20:08	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 20:08	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 20:08	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 20:08	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 20:08	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 20:08	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 09:55	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

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

Sample Description: WS-003(Surface)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179107
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 13:15 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2803- SDG#: PEL11-13

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

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

Sample Description: WS-003(Surface)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179107
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 13:15 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/29/2013 09:25

Highlands Ranch CO 80129

Reported: 09/05/2013 13:58

2803- SDG#: PEL11-13

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	0.1 J	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
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	0.014 J	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	0.011 J	0.010	0.052	1
08357	Chrysene	218-01-9	0.011 J	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.052	1
08357	Fluoranthene	206-44-0	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	0.012 J	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	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	29.0	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0104 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0394	0.00033	0.0050	1

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

Sample Description: WS-003 (Surface) 082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179107
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 13:15 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2803- SDG#: PEL11-13

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	6.61	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	3.03	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 VOCs 8260	SW-846 8260B 25mL purge	1	H132421AA	08/30/2013 17:11	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 17:11	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132411WAJ026	09/01/2013 12:18	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	132411WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 20:12	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 13:10	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 20:12	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 20:12	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 20:12	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 20:12	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 20:12	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 20:12	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 20:12	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 20:12	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 20:12	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 09:57	Damary Valentini	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1

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

Sample Description: WS-003 (Surface) 082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179107
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 13:15 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/29/2013 09:25

Highlands Ranch CO 80129

Reported: 09/05/2013 13:58

2803- SDG#: PEL11-13

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	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

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

Sample Description: WS-007(0.5-1.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179108
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 13:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2807- SDG#: PEL11-14

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

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

Sample Description: WS-007(0.5-1.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179108
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 13:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2807- SDG#: PEL11-14

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	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	0.011 J	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.026 J	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.011 J	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.016 J	0.010	0.051	1
08357	Chrysene	218-01-9	0.016 J	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	0.019 J	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.014 J	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	0.025 J	0.010	0.051	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	16.9	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	0.0194	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.03	0.0334	0.200	1

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

Sample Description: WS-007(0.5-1.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179108
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 13:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2807- SDG#: PEL11-14

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	1.66	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0015 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		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	H132421AA	08/30/2013 17:32	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 17:32	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13241WAJ026	09/01/2013 12:48	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13241WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 20:23	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 13:14	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 20:23	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 20:23	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 20:23	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 20:23	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 20:23	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 20:23	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 20:23	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 20:23	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 20:23	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 09:59	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

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

Sample Description: WS-001(0.5-1.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179109
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 13:40 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2801- SDG#: PEL11-15

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

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

Sample Description: WS-001(0.5-1.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179109
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 13:40 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2801- SDG#: PEL11-15

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	0.052	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 CaCO ₃	471-34-1	29.7	0.033	0.20	1
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0126 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.101	0.00033	0.0050	1

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

Sample Description: WS-001(0.5-1.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179109
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 13:40 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

2801- SDG#: PEL11-15

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	6.67	0.0334	0.200	1
07051	Chromium	7440-47-3	0.0036 J	0.0016	0.0150	1
07055	Lead	7439-92-1	0.0077 J	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.15	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0052 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.0048 J	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.	1.9 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	H132421AA	08/30/2013 17:53	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 17:53	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13241WAJ026	09/01/2013 13:17	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13241WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 20:27	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 13:18	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 20:27	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 20:27	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 20:27	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 20:27	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 20:27	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 20:27	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 20:27	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 20:27	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 20:27	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 10:01	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1

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

Sample Description: WS-001(0.5-1.0)082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179109
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 13:40 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/29/2013 09:25

Highlands Ranch CO 80129

Reported: 09/05/2013 13:58

2801- SDG#: PEL11-15

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	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

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

Sample Description: DUP-WS-78-082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179110
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28D78 SDG#: PEL11-16FD

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: DUP-WS-78-082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179110
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28D78 SDG#: PEL11-16FD

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
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	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	29.5	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0079 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0436	0.00033	0.0050	1

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

Sample Description: DUP-WS-78-082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179110
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28D78 SDG#: PEL11-16FD

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	7.09	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.88	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0018 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	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	H132421AA	08/30/2013 18:14	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 18:14	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13241WAJ026	09/01/2013 13:47	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13241WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 20:30	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 13:22	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 20:30	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 20:30	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 20:30	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 20:30	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 20:30	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 20:30	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 20:30	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 20:30	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 20:30	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 10:03	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1

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

Sample Description: DUP-WS-78-082813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179110
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 by TM

ExxonMobil c/o Arcadis

Submitted: 08/29/2013 09:25

630 Plaza Drive, Suite 600

Reported: 09/05/2013 13:58

Highlands Ranch CO 80129

28D78 SDG#: PEL11-16FD

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	13247807901A	09/04/2013 08:37	Yolunder Y Bunch	1

Sample Description: WS-EB-044-082813 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179111
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 14:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28E44 SDG#: PEL11-17EB

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-EB-044-082813 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179111
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 14:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28E44 SDG#: PEL11-17EB

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	0.1 J	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
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	0.11	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	0.40	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	0.00060 J	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	0.126 J	0.0334	0.200	1

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

Sample Description: WS-EB-044-082813 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179111
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013 14:30 by TM

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

Submitted: 08/29/2013 09:25

Reported: 09/05/2013 13:58

28E44 SDG#: PEL11-17EB

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	0.0199 J	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		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	H132421AA	08/30/2013 18:35	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 18:35	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13241WAJ026	09/01/2013 14:16	Brian K Graham	1
10470	BNP Water Extraction (SIM)	SW-846 3510C	1	13241WAJ026	08/30/2013 09:20	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132456256001	09/02/2013 07:40	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132411848001	08/31/2013 20:34	John P Hook	1
07046	Barium	SW-846 6010B	1	132411848001	09/02/2013 13:25	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132411848001	08/31/2013 20:34	John P Hook	1
01750	Calcium	SW-846 6010B	1	132411848001	08/31/2013 20:34	John P Hook	1
07051	Chromium	SW-846 6010B	1	132411848001	08/31/2013 20:34	John P Hook	1
07055	Lead	SW-846 6010B	1	132411848001	08/31/2013 20:34	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132411848001	08/31/2013 20:34	John P Hook	1
07061	Nickel	SW-846 6010B	1	132411848001	08/31/2013 20:34	John P Hook	1
07036	Selenium	SW-846 6010B	1	132411848001	08/31/2013 20:34	John P Hook	1
07066	Silver	SW-846 6010B	1	132411848001	08/31/2013 20:34	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132411848001	08/31/2013 20:34	John P Hook	1
00259	Mercury	SW-846 7470A	1	132415713001	08/30/2013 10:05	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132411848001	08/30/2013 09:52	Denise K Connors	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132415713001	08/29/2013 15:15	Nelli S Markaryan	1

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

Sample Description: WS-TB-135-082813 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179112
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013

ExxonMobil c/o Arcadis

Submitted: 08/29/2013 09:25

630 Plaza Drive, Suite 600

Reported: 09/05/2013 13:58

Highlands Ranch CO 80129

28135 SDG#: PEL11-18TB*

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-135-082813 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7179112
LL Group # 1415030
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/28/2013

ExxonMobil c/o Arcadis

Submitted: 08/29/2013 09:25

630 Plaza Drive, Suite 600

Reported: 09/05/2013 13:58

Highlands Ranch CO 80129

28135 SDG#: PEL11-18TB*

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	H132421AA	08/30/2013 18:56	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	H132421AA	08/30/2013 18:56	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: 09/05/13 at 01:58 PM

Group Number: 1415030

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: H132421AA	Sample number(s): 7179092-7179100, 7179102-7179112								
Acetone	N.D.	3.0	5.0	ug/l	101		60-139		
Allyl Chloride	N.D.	0.1	0.5	ug/l	94		61-130		
Benzene	N.D.	0.1	0.5	ug/l	100		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	103		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	105		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	110		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	106		73-128		
Bromomethane	N.D.	0.1	0.5	ug/l	85		62-126		
2-Butanone	N.D.	1.0	5.0	ug/l	101		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	103		80-120		
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	100		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	101		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	114		80-129		
Chlorobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	88		68-120		
Chloroform	N.D.	0.1	0.5	ug/l	110		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	84		55-120		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	101		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	104		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	84		64-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	109		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	109		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	103		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	72		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	105		80-120		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	117		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	101		80-123		
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	100		80-120		
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	102		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	100		75-145		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	106		80-120		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	108		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	110		75-122		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	103		80-121		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	101		80-123		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	109		80-120		
Ethyl ether	N.D.	0.1	0.5	ug/l	111		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	101		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	99		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 SummaryClient Name: ExxonMobil c/o Arcadis
Reported: 09/05/13 at 01:58 PM

Group Number: 1415030

<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>
Isopropylbenzene	N.D.	0.1	0.5	ug/l	102		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	99		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	101		80-120		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	111		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	103		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	103		80-120		
Styrene	N.D.	0.1	0.5	ug/l	106		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	111		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	109		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	101		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	89		65-131		
Toluene	N.D.	0.1	0.5	ug/l	103		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	83		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	88		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	109		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	111		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	102		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	96		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	112		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	104		80-120		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	102		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	85		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	104		80-120		

Batch number: 13241WAJ026

Sample number(s): 7179092-7179100,7179102-7179111

Acenaphthene	N.D.	0.010	0.050	ug/l	107		77-118		
Acenaphthylene	N.D.	0.010	0.050	ug/l	113		80-123		
Anthracene	N.D.	0.010	0.050	ug/l	107		78-123		
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	91		73-127		
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	96		72-120		
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	101		79-136		
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	109		64-130		
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	122		73-131		
Chrysene	N.D.	0.010	0.050	ug/l	109		76-125		
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	104		58-131		
Fluoranthene	N.D.	0.010	0.050	ug/l	110		79-124		
Fluorene	N.D.	0.010	0.050	ug/l	105		74-115		
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	110		62-130		
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	115		80-126		
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	113		81-124		
Naphthalene	N.D.	0.030	0.050	ug/l	110		75-120		
Phenanthrene	N.D.	0.030	0.050	ug/l	108		75-120		
Pyrene	N.D.	0.010	0.050	ug/l	103		71-130		

Batch number: 132411848001

Sample number(s): 7179092-7179111

Arsenic	N.D.	0.0068	0.0200	mg/l	92		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	91		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	90		90-112		
Calcium	0.0420 J	0.0334	0.200	mg/l	91		90-110		
Chromium	N.D.	0.0016	0.0150	mg/l	90		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	88		88-110		
Magnesium	N.D.	0.0167	0.100	mg/l	90		90-110		
Nickel	N.D.	0.0015	0.0100	mg/l	92		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	88		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	103		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	92		90-110		

*- Outside of specification

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

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1415030

Reported: 09/05/13 at 01:58 PM

<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: 132415713001	Sample number(s): 7179092-7179111								
Mercury	N.D.	0.00006	0.00020	mg/l	100		80-120		
		0							
Batch number: 13247807901A	Sample number(s): 7179092-7179110								
HEM (oil & grease)	N.D.	1.4	5.0	mg/l	89	92	78-114	3	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: H132421AA	Sample number(s): 7179092-7179100, 7179102-7179112 UNSPK: 7179098								
Acetone	108	113	57-163	4	30				
Allyl Chloride	108	103	56-160	5	30				
Benzene	103	107	87-126	4	30				
Bromobenzene	108	111	80-123	3	30				
Bromochloromethane	112	105	82-125	7	30				
Bromodichloromethane	110	118	82-133	7	30				
Bromoform	110	113	60-138	2	30				
Bromomethane	96	93	66-130	3	30				
2-Butanone	104	113	56-160	8	30				
n-Butylbenzene	111	111	83-131	0	30				
sec-Butylbenzene	108	108	84-128	0	30				
tert-Butylbenzene	110	108	84-135	2	30				
Carbon Tetrachloride	121	124	81-148	2	30				
Chlorobenzene	108	113	78-133	5	30				
Chloroethane	99	99	70-139	0	30				
Chloroform	113	119	86-136	5	30				
Chloromethane	95	94	49-135	1	30				
2-Chlorotoluene	107	110	75-134	2	30				
4-Chlorotoluene	110	112	76-134	2	30				
1,2-Dibromo-3-chloropropane	101	100	43-143	2	30				
Dibromochloromethane	112	119	79-125	5	30				
1,2-Dibromoethane	107	115	84-127	7	30				
Dibromomethane	103	110	83-126	7	30				
1,2-Dichlorobenzene	113	113	83-117	1	30				
1,3-Dichlorobenzene	112	111	79-132	0	30				
1,4-Dichlorobenzene	112	112	79-120	1	30				
Dichlorodifluoromethane	83	82	28-136	1	30				
1,1-Dichloroethane	109	113	88-136	3	30				
1,2-Dichloroethane	118	123	82-135	4	30				
1,1-Dichloroethene	108	109	83-150	1	30				
cis-1,2-Dichloroethene	100	104	82-129	4	30				
trans-1,2-Dichloroethene	109	111	88-127	2	30				
Dichlorofluoromethane	116	112	81-161	3	30				
1,2-Dichloropropane	106	114	91-126	7	30				
1,3-Dichloropropane	107	114	80-127	6	30				
2,2-Dichloropropane	117	120	80-134	2	30				
1,1-Dichloropropene	112	115	86-139	3	30				

*- Outside of specification

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

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1415030

Reported: 09/05/13 at 01:58 PM

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>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	98	108	74-132	10	30				
trans-1,3-Dichloropropene	108	116	71-128	7	30				
Ethyl ether	118	116	57-139	2	30				
Ethylbenzene	105	111	80-140	5	30				
Freon 113	108	109	77-147	1	30				
Hexachlorobutadiene	103	100	65-128	3	30				
Isopropylbenzene	107	111	81-133	4	30				
p-Isopropyltoluene	107	107	84-124	1	30				
Methyl Tertiary Butyl Ether	99	105	82-132	5	30				
4-Methyl-2-Pentanone	117	124	69-149	6	30				
Methylene Chloride	103	105	77-135	2	30				
n-Propylbenzene	110	112	79-131	2	30				
Styrene	111	116	63-151	5	30				
1,1,1,2-Tetrachloroethane	113	120	87-126	7	30				
1,1,2,2-Tetrachloroethane	115	117	75-131	1	30				
Tetrachloroethene	106	112	75-129	5	30				
Tetrahydrofuran	89	99	56-154	11	30				
Toluene	106	113	83-127	6	30				
1,2,3-Trichlorobenzene	86	91	73-125	5	30				
1,2,4-Trichlorobenzene	93	96	77-120	3	30				
1,1,1-Trichloroethane	117	122	85-140	4	30				
1,1,2-Trichloroethane	112	118	85-129	5	30				
Trichloroethene	107	113	85-131	5	30				
Trichlorofluoromethane	114	108	73-139	5	30				
1,2,3-Trichloropropane	122*	120	76-120	2	30				
1,2,4-Trimethylbenzene	111	112	87-126	0	30				
1,3,5-Trimethylbenzene	110	111	89-129	1	30				
Vinyl Chloride	99	97	62-135	3	30				
Xylene (Total)	107	113	81-137	5	30				

Batch number: 13241WAJ026

Sample number(s): 7179092-7179100,7179102-7179111 UNSPK: 7179098

Acenaphthene	75	72	47-136	2	30
Acenaphthylene	118	117	33-146	1	30
Anthracene	6*	4*	69-119	40*	30
Benzo(a)anthracene	55	54	37-150	0	30
Benzo(a)pyrene	19*	16*	64-123	15	30
Benzo(b)fluoranthene	86	86	33-152	3	30
Benzo(g,h,i)perylene	70	67	36-138	1	30
Benzo(k)fluoranthene	75	76	31-142	3	30
Chrysene	85	85	34-135	3	30
Dibenz(a,h)anthracene	85	86	17-134	4	30
Fluoranthene	106	105	39-147	2	30
Fluorene	108	105	38-149	0	30
Indeno(1,2,3-cd)pyrene	82	82	29-143	3	30
1-Methylnaphthalene	114	115	49-152	3	30
2-Methylnaphthalene	111	111	51-146	3	30
Naphthalene	108	109	58-131	3	30
Phenanthrene	106	105	48-140	1	30
Pyrene	55*	52*	59-125	4	30

Batch number: 132411848001

Sample number(s): 7179092-7179111 UNSPK: 7179098 BKG: 7179098

Arsenic	90	91	81-123	1	20	0.0098 J	0.0089 J	10 (1)	20
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*- Outside of specification

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1415030

Reported: 09/05/13 at 01:58 PM

Sample Matrix Quality Control

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

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Barium	92	91	78-118	1	20	0.0513	0.0500	3	20
Cadmium	91	91	83-116	0	20	N.D.	N.D.	0 (1)	20
Calcium	91	86	81-118	2	20	6.59	6.47	2	20
Chromium	93	92	81-120	1	20	N.D.	N.D.	0 (1)	20
Lead	91	92	75-125	1	20	N.D.	N.D.	0 (1)	20
Magnesium	90	84	75-125	3	20	2.97	2.93	2	20
Nickel	94	93	86-115	1	20	N.D.	N.D.	0 (1)	20
Selenium	87	88	75-125	1	20	N.D.	N.D.	0 (1)	20
Silver	106	105	75-125	1	20	N.D.	N.D.	0 (1)	20
Vanadium	96	94	90-111	2	20	N.D.	N.D.	0 (1)	20

Batch number: 132415713001

Sample number(s): 7179092-7179111 UNSPK: 7179098 BKG: 7179098

Mercury

97 97 80-120 0 20 N.D. N.D. 0 (1) 20

Batch number: 13247807901A

Sample number(s): 7179092-7179110 UNSPK: 7179098 BKG: 7179098

HEM (oil & grease)

64* 73* 78-114 15 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: H132421AA

Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8 4-Bromofluorobenzene

7179092	112	108	102	99
7179093	112	106	102	98
7179094	113	106	101	98
7179095	114	110	102	98
7179096	113	109	102	97
7179097	113	108	102	99
7179098	112	105	102	98
7179099	108	103	104	103
7179100	108	104	105	105
7179102	111	106	103	100
7179103	111	108	102	100
7179104	113	108	100	98
7179105	113	112	101	99
7179106	112	107	101	98
7179107	112	108	101	98
7179108	111	111	101	99
7179109	112	113	101	99
7179110	111	107	103	99
7179111	112	106	102	98
7179112	112	108	102	98
Blank	112	107	103	98
LCS	107	105	103	104
MS	108	103	104	103

*- 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

Group Number: 1415030

Reported: 09/05/13 at 01:58 PM

Surrogate Quality Control

MSD	108	104	105	105
Limits:	77-114	74-113	77-110	78-110
Analysis Name: PAHs in waters by SIM				
Batch number: 13241WAJ026				
	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10	
7179092	94	69	111	
7179093	90	59*	109	
7179094	90	61*	107	
7179095	88	51*	108	
7179096	88	52*	106	
7179097	89	35*	108	
7179098	92	61*	110	
7179099	94	59*	111	
7179100	93	57*	111	
7179102	91	73	107	
7179103	95	68	112	
7179104	94	60*	112	
7179105	93	70	109	
7179106	93	63	109	
7179107	93	61*	111	
7179108	95	94	111	
7179109	94	60*	114	
7179110	88	56*	110	
7179111	95	93	109	
Blank	85	82	102	
LCS	93	94	112	
MS	94	59*	111	
MSD	93	57*	111	
Limits:	44-137	62-141	51-136	

*- Outside of specification

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ExxonMobil Analysis Request/Chain of Custody



**Lancaster
Laboratories**

Acct. # 14739 Group # 1415030 Sample # 7179092-112
For Eurofins Lancaster Laboratories use only
Instructions on reverse side correspond with circled numbers.

pg. 1 of 2

1 Client Information				4 Matrix		5 Analyses Requested										6 Remarks	
Facility #/SID <u>Mayflower Pipeline Incident</u>				☐ Sediment	☐ Ground	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>						☐ Potable	☐ NPDES	☒ Surface									
ExxonMobil PM <u>Scott Bushroe</u>		Cost Center/AFE		☐ Air	Total # of Containers											6 <u>Lab to filter & preserve Diss. Metals upon receipt</u>	
Consultant/Office <u>Areodis</u>		Consultant Phone # <u>919-302-6799</u>		☐ Oil													
Sampler <u>Tyler Milburn / Johnny Beasley</u>				☐ Soil	☐ Water												
				☐ Grab	☐ Composite												
2 Sample Identification				3 Collected													
		Date	Time	Grab	Composite												
WS-014(1.5-2.0)082813		8/28/13	920	☒		☒											
WS-014(5.5-6.0)082813			930	☒		☒											
WS-012(1.5-2.0)082813			945	☒		☒											
WS-012(5.0-5.5)082813			955	☒		☒											
WS-010(1.5-2.0)082813			1010	☒		☒											
WS-010(3.5-4.0)082813			1020	☒		☒											
WS-006(0.5-1.0)082813			1030	☒		☒											
WS-006(0.5-1.0)082813 MS/MSD			1030	☒		☒											MS/MSD
WS-005(Surface)082813			1115	☒		☒											
WS-002(Surface)082813			1135	☒		☒											
WS-018(Surface)082813			1305	☒		☒											
WS-011(1.5-2.0)082813			1200	☒		☒											

7 Turnaround Time Requested (TAT) (please circle)			Relinquished by <u>Tyler Mill</u>		Date <u>8/28/13</u>	Time <u>1600</u>	Received by	Date	Time	9
Standard <u>5 day</u> 4 day			Relinquished by		Date	Time	Received by	Date	Time	
72 hour 48 hour 24 hour			Relinquished by		Date	Time	Received by	Date	Time	
8 Data Package (circle if required)			EDD (circle if required)		Relinquished by Commercial Carrier		Received by		Date	Time
Type I - Full			Locus EIM (default)		UPS ☒ FedEx _____ Other _____		<u>Deborah Nestl</u>		<u>8/29/13</u>	<u>0925</u>
Type VI (Raw Data)			Other _____		Temperature Upon Receipt <u>0.3-4.2</u> °C		Custody Seals Intact?		<u>Yes</u>	No
NJ Reduced										
Other _____										

pg. 2 of 2

[illegible]

Environmental Sample Administration 1415030
Receipt Documentation LogClient/Project: XOM MayflowerShipping Container Sealed: YES NODate of Receipt: 8/29/13Custody Seal Present * : YES NOTime of Receipt: 0925

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

Source Code: 60-1Package: 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	1.5	TB	WI	Y	B	
2	↓	1.9	↓	↓	↓	↓	
3	↓	0.3	↓	↓	↓	↓	
4	↓	4.2	↓	↓	↓	↓	
5	↓	0.8	↓	↓	↓	↓	
6	↓	1.9	↓	↓	↓	↓	

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: Dan Lund / 208 Date/Time: 8/29/13 / 1000

Issued by Dept. 6042 Management

Environmental Sample Administration 1415030
Receipt Documentation LogClient/Project: XOM MayflowerShipping Container Sealed: YES NODate of Receipt: 8/29/13Custody Seal Present * : YES NOTime of Receipt: 0925

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

Source Code: 60-1Package: 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
<u>300</u> <u>8/29/13</u> <u>7</u>	<u>DT 146</u>	<u>0.6</u>	<u>TB</u>	<u>WI</u>	<u>Y</u>	<u>B</u>	
2							
3							
4							
5							
6							

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: D. Neslund / 208 Date/Time: 8/29/13 / 1000

Issued by Dept. 6042 Management

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 <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Data Qualifiers:

C – result confirmed by reanalysis.

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

U.S. EPA CLP Data Qualifiers:

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