

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 09, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 08/30/2013

Group Number: 1415365

SDG: PEL13

PO Number: B0086003.1301

State of Sample Origin: AR

Client Sample DescriptionLancaster Labs (LL) #

WS-014(1.5-2.0)082913 Grab Surface Water	7180715
WS-014(5.5-6.0)082913 Grab Surface Water	7180716
WS-012(1.5-2.0)082913 Grab Surface Water	7180717
WS-012(5.0-5.5)082913 Grab Surface Water	7180718
WS-010(1.5-2.0)082913 Grab Surface Water	7180719
WS-010(3.5-4.0)082913 Grab Surface Water	7180720
WS-006(0.5-1.0)082913 Grab Surface Water	7180721
WS-005(Surface)082913 Grab Surface Water	7180722
WS-002(Surface)082913 Grab Surface Water	7180723
WS-018(Surface)082913 Grab Surface Water	7180724
WS-011(1.5-2.0)082913 Grab Surface Water	7180725
WS-011(5.0-5.5)082913 Grab Surface Water	7180726
WS-003(Surface)082913 Grab Surface Water	7180727
WS-007(0.5-1.0)082913 Grab Surface Water	7180728
WS-001(0.5-1.0)082913 Grab Surface Water	7180729
DUP-WS-79-082913 Grab Surface Water	7180730
WS-EB-045-082913 Grab Water	7180731
WS-TB-136-082913 Water	7180732

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

ELECTRONIC ARCADIS

Attn: Stephen Barrick

COPY TO

ELECTRONIC ARCADIS

Attn: Lyndi Mott

COPY TO

ELECTRONIC ExxonMobil

Attn: Michael J. Firth

COPY TO

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

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1415365

General Comments:

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

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

Project specific QC samples are not included in this data set

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

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

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

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

Batch #: G132422AA (Sample number(s): 7180715-7180732 UNSPK: 7180715)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Tetrachloroethene

SW-846 8270C SIM, GC/MS Semivolatiles

Batch #: 13246WAD026 (Sample number(s): 7180715-7180731)

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7180715, 7180716, 7180717, 7180718, 7180719, 7180720, 7180721, 7180722, 7180723, 7180724, 7180725, 7180726, 7180727, 7180729, 7180730

Sample #s: 7180728, 7180731

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

Sample #s: 7180715, 7180716, 7180717, 7180718, 7180719, 7180720, 7180721, 7180722, 7180723, 7180724, 7180725, 7180726, 7180727, 7180729, 7180730

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

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

Sample Description: WS-014(1.5-2.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180715
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 08:30 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/30/2013 09:30

Highlands Ranch CO 80129

Reported: 09/09/2013 10:14

29141 SDG#: PEL13-01

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)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180715
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 08:30 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29141 SDG#: PEL13-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.052	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.052	1
08357	Anthracene	120-12-7	N.D.	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.052	1
08357	Chrysene	218-01-9	N.D.	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.052	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.052	1
08357	Fluorene	86-73-7	N.D.	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.052	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.052	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.052	1
08357	Pyrene	129-00-0	N.D.	0.010	0.052	1

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

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	27.7	0.033	0.20

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

Sample Description: WS-014(1.5-2.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180715
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 08:30 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29141 SDG#: PEL13-01

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	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0286	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.38	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.85	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	G132422AA	08/30/2013 21:22	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/30/2013 21:22	Sara E Johnson	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132421848001	09/04/2013 16:28	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAD026	09/03/2013 17:10	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 05:09	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132421848001	09/03/2013 19:16	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132421848001	09/03/2013 19:16	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132421848001	09/03/2013 19:16	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132421848001	09/03/2013 19:16	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132421848001	09/03/2013 19:16	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132421848001	09/03/2013 19:16	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132421848001	09/03/2013 19:16	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132421848001	09/03/2013 19:16	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132421848001	09/03/2013 19:16	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132421848001	09/03/2013 19:16	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132421848001	09/03/2013 19:16	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132425713003	09/01/2013 06:01	Damary Valentin	1

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

Sample Description: WS-014(1.5-2.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180715
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 08:30 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/30/2013 09:30

Highlands Ranch CO 80129

Reported: 09/09/2013 10:14

29141 SDG#: PEL13-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132421848001	09/03/2013 10:50	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132425713003	08/31/2013 09:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13248807902A	09/05/2013 17:04	Michelle L Lalli	1

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

Sample Description: WS-014(5.5-6.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180716
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 08:40 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29142 SDG#: PEL13-02

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

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

Sample Description: WS-014(5.5-6.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180716
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 08:40 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29142 SDG#: PEL13-02

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

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	27.9	0.033	0.20

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

Sample Description: WS-014(5.5-6.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180716
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 08:40 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29142 SDG#: PEL13-02

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	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0293	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.42	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	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	G132422AA	08/30/2013 21:44	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/30/2013 21:44	Sara E Johnson	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132421848001	09/04/2013 16:57	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAD026	09/03/2013 17:10	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 05:09	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132421848001	09/03/2013 19:26	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132421848001	09/03/2013 19:26	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132421848001	09/03/2013 19:26	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132421848001	09/03/2013 19:26	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132421848001	09/03/2013 19:26	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132421848001	09/03/2013 19:26	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132421848001	09/03/2013 19:26	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132421848001	09/03/2013 19:26	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132421848001	09/03/2013 19:26	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132421848001	09/03/2013 19:26	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132421848001	09/03/2013 19:26	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132425713003	09/01/2013 06:03	Damary Valentin	1

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

Sample Description: WS-014(5.5-6.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180716
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 08:40 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29142 SDG#: PEL13-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132421848001	09/03/2013 10:50	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132425713003	08/31/2013 09:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13248807902A	09/05/2013 17:04	Michelle L Lalli	1

Sample Description: WS-012(1.5-2.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180717
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:00 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29121 SDG#: PEL13-03

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)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180717
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:00 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29121 SDG#: PEL13-03

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

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	27.5	0.033	0.20

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

Sample Description: WS-012(1.5-2.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180717
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:00 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29121 SDG#: PEL13-03

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	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0306	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.34	0.0334	0.200	1
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	2.84	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.	1.6 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	G132422AA	08/30/2013 22:06	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/30/2013 22:06	Sara E Johnson	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAD026	09/04/2013 17:27	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAD026	09/03/2013 17:10	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 05:09	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132421848001	09/03/2013 19:30	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132421848001	09/03/2013 19:30	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132421848001	09/03/2013 19:30	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132421848001	09/03/2013 19:30	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132421848001	09/03/2013 19:30	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132421848001	09/03/2013 19:30	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132421848001	09/03/2013 19:30	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132421848001	09/03/2013 19:30	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132421848001	09/03/2013 19:30	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132421848001	09/03/2013 19:30	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132421848001	09/03/2013 19:30	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132425713003	09/01/2013 06:05	Damary Valentin	1

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

Sample Description: WS-012(1.5-2.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180717
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:00 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/30/2013 09:30

Highlands Ranch CO 80129

Reported: 09/09/2013 10:14

29121 SDG#: PEL13-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132421848001	09/03/2013 10:50	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132425713003	08/31/2013 09:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13248807902A	09/05/2013 17:04	Michelle L Lalli	1

Sample Description: WS-012(5.0-5.5)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180718
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:10 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29122 SDG#: PEL13-04

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)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180718
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:10 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29122 SDG#: PEL13-04

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	0.051	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 laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	28.7	0.033	0.20

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

Sample Description: WS-012(5.0-5.5)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180718
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:10 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29122 SDG#: PEL13-04

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	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0453	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.63	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	G132422AA	08/30/2013 22:28	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/30/2013 22:28	Sara E Johnson	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132421848001	09/04/2013 17:56	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAD026	09/03/2013 17:10	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 05:09	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132421848001	09/03/2013 19:34	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132421848001	09/03/2013 19:34	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132421848001	09/03/2013 19:34	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132421848001	09/03/2013 19:34	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132421848001	09/03/2013 19:34	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132421848001	09/03/2013 19:34	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132421848001	09/03/2013 19:34	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132421848001	09/03/2013 19:34	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132421848001	09/03/2013 19:34	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132421848001	09/03/2013 19:34	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132421848001	09/03/2013 19:34	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132425713003	09/01/2013 06:18	Damary Valentin	1

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

Sample Description: WS-012(5.0-5.5)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180718
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:10 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29122 SDG#: PEL13-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132421848001	09/03/2013 10:50	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132425713003	08/31/2013 09:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13248807902A	09/05/2013 17:04	Michelle L Lalli	1

Sample Description: WS-010(1.5-2.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180719
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:25 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29101 SDG#: PEL13-05

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

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

Sample Description: WS-010(1.5-2.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180719
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:25 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29101 SDG#: PEL13-05

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	0.012 J	0.010	0.052	1

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	28.6	0.033	0.20

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

Sample Description: WS-010(1.5-2.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180719
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:25 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29101 SDG#: PEL13-05

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	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.124	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.64	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	2.92	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	G132422AA	08/30/2013 22:49	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/30/2013 22:49	Sara E Johnson	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132421848001	09/04/2013 18:26	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAD026	09/03/2013 17:10	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 05:09	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132421848001	09/03/2013 19:37	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132421848001	09/03/2013 19:37	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132421848001	09/03/2013 19:37	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132421848001	09/03/2013 19:37	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132421848001	09/03/2013 19:37	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132421848001	09/03/2013 19:37	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132421848001	09/03/2013 19:37	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132421848001	09/03/2013 19:37	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132421848001	09/03/2013 19:37	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132421848001	09/03/2013 19:37	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132421848001	09/03/2013 19:37	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132425713003	09/01/2013 06:20	Damary Valentin	1

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

Sample Description: WS-010(1.5-2.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180719
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:25 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29101 SDG#: PEL13-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132421848001	09/03/2013 10:50	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132425713003	08/31/2013 09:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13248807902A	09/05/2013 17:04	Michelle L Lalli	1

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

Sample Description: WS-010(3.5-4.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180720
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:35 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29102 SDG#: PEL13-06

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

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

Sample Description: WS-010(3.5-4.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180720
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:35 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29102 SDG#: PEL13-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	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	0.011 J	0.010	0.051	1

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	29.9	0.033	0.20

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

Sample Description: WS-010(3.5-4.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180720
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:35 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29102 SDG#: PEL13-06

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	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.301	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.00	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	3.02	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	G132422AA	08/30/2013 23:11	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/30/2013 23:11	Sara E Johnson	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132421848001	09/04/2013 18:55	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAD026	09/03/2013 17:10	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 05:09	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132421848001	09/03/2013 19:41	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132421848001	09/03/2013 19:41	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132421848001	09/03/2013 19:41	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132421848001	09/03/2013 19:41	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132421848001	09/03/2013 19:41	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132421848001	09/03/2013 19:41	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132421848001	09/03/2013 19:41	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132421848001	09/03/2013 19:41	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132421848001	09/03/2013 19:41	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132421848001	09/03/2013 19:41	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132421848001	09/03/2013 19:41	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132425713003	09/01/2013 06:22	Damary Valentin	1

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

Sample Description: WS-010(3.5-4.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180720
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:35 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/30/2013 09:30

Highlands Ranch CO 80129

Reported: 09/09/2013 10:14

29102 SDG#: PEL13-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132421848001	09/03/2013 10:50	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132425713003	08/31/2013 09:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13248807902A	09/05/2013 17:04	Michelle L Lalli	1

Sample Description: WS-006(0.5-1.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180721
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:45 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29006 SDG#: PEL13-07

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

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

Sample Description: WS-006(0.5-1.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180721
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:45 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29006 SDG#: PEL13-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	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 laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

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	28.3	0.033	0.20

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

Sample Description: WS-006(0.5-1.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180721
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:45 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29006 SDG#: PEL13-07

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	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0462	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.51	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.	1.5 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132422AA	08/30/2013 23:33	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/30/2013 23:33	Sara E Johnson	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132421848001	09/04/2013 19:25	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAD026	09/03/2013 17:10	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 05:09	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132421848001	09/03/2013 19:44	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132421848001	09/03/2013 19:44	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132421848001	09/03/2013 19:44	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132421848001	09/03/2013 19:44	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132421848001	09/03/2013 19:44	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132421848001	09/03/2013 19:44	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132421848001	09/03/2013 19:44	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132421848001	09/03/2013 19:44	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132421848001	09/03/2013 19:44	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132421848001	09/03/2013 19:44	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132421848001	09/03/2013 19:44	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132425713003	09/01/2013 06:24	Damary Valentin	1

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

Sample Description: WS-006(0.5-1.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180721
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 09:45 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29006 SDG#: PEL13-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132421848001	09/03/2013 10:50	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132425713003	08/31/2013 09:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13248807902A	09/05/2013 17:04	Michelle L Lalli	1

Sample Description: WS-005(Surface)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180722
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 10:25 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29005 SDG#: PEL13-08

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

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

Sample Description: WS-005(Surface)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180722
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 10:25 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29005 SDG#: PEL13-08

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

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	35.4	0.033	0.20

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

Sample Description: WS-005(Surface)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180722
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 10:25 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29005 SDG#: PEL13-08

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	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0430	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	9.50	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	2.84	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0016 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
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	G132422AA	08/30/2013 23:55	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/30/2013 23:55	Sara E Johnson	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132421848001	09/04/2013 19:55	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAD026	09/03/2013 17:10	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 05:09	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132421848001	09/03/2013 19:48	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132421848001	09/03/2013 19:48	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132421848001	09/03/2013 19:48	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132421848001	09/03/2013 19:48	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132421848001	09/03/2013 19:48	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132421848001	09/03/2013 19:48	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132421848001	09/03/2013 19:48	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132421848001	09/03/2013 19:48	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132421848001	09/03/2013 19:48	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132421848001	09/03/2013 19:48	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132421848001	09/03/2013 19:48	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132425713003	09/01/2013 06:26	Damary Valentin	1

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

Sample Description: WS-005(Surface)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180722
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 10:25 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29005 SDG#: PEL13-08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132421848001	09/03/2013 10:50	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132425713003	08/31/2013 09:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13248807902A	09/05/2013 17:04	Michelle L Lalli	1

Sample Description: WS-002(Surface)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180723
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 10:50 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/30/2013 09:30

Highlands Ranch CO 80129

Reported: 09/09/2013 10:14

29002 SDG#: PEL13-09

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

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

Sample Description: WS-002(Surface)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180723
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 10:50 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/30/2013 09:30

Highlands Ranch CO 80129

Reported: 09/09/2013 10:14

29002 SDG#: PEL13-09

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	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 laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	28.3	0.033	0.20

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

Sample Description: WS-002(Surface)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180723
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 10:50 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29002 SDG#: PEL13-09

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	
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	6.62	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	2.85	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	G132422AA	08/31/2013 00:17	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/31/2013 00:17	Sara E Johnson	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132421848001	09/04/2013 20:24	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAD026	09/03/2013 17:10	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 05:09	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132421848001	09/03/2013 19:52	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132421848001	09/03/2013 19:52	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132421848001	09/03/2013 19:52	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132421848001	09/03/2013 19:52	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132421848001	09/03/2013 19:52	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132421848001	09/03/2013 19:52	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132421848001	09/03/2013 19:52	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132421848001	09/03/2013 19:52	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132421848001	09/03/2013 19:52	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132421848001	09/03/2013 19:52	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132421848001	09/03/2013 19:52	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132425713003	09/01/2013 06:28	Damary Valentin	1

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

Sample Description: WS-002 (Surface) 082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180723
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 10:50 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29002 SDG#: PEL13-09

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132421848001	09/03/2013 10:50	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132425713003	08/31/2013 09:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13248807902A	09/05/2013 17:04	Michelle L Lalli	1

Sample Description: WS-018(Surface)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180724
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 12:35 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29018 SDG#: PEL13-10

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

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

Sample Description: WS-018(Surface)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180724
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 12:35 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29018 SDG#: PEL13-10

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 laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	28.3	0.033	0.20

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

Sample Description: WS-018(Surface)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180724
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 12:35 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29018 SDG#: PEL13-10

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	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0875	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.45	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	2.96	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	G132422AA	08/31/2013 00:39	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/31/2013 00:39	Sara E Johnson	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132421848001	09/04/2013 20:54	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAD026	09/03/2013 17:10	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 05:09	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132421848001	09/03/2013 19:55	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132421848001	09/03/2013 19:55	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132421848001	09/03/2013 19:55	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132421848001	09/03/2013 19:55	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132421848001	09/03/2013 19:55	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132421848001	09/03/2013 19:55	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132421848001	09/03/2013 19:55	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132421848001	09/03/2013 19:55	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132421848001	09/03/2013 19:55	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132421848001	09/03/2013 19:55	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132421848001	09/03/2013 19:55	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132425713003	09/01/2013 06:30	Damary Valentin	1

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

Sample Description: WS-018 (Surface) 082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180724
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 12:35 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/30/2013 09:30

Highlands Ranch CO 80129

Reported: 09/09/2013 10:14

29018 SDG#: PEL13-10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132421848001	09/03/2013 10:50	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132425713003	08/31/2013 09:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13248807902A	09/05/2013 17:04	Michelle L Lalli	1

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

Sample Description: WS-011(1.5-2.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180725
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 11:10 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29111 SDG#: PEL13-11

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

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

Sample Description: WS-011(1.5-2.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180725
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 11:10 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29111 SDG#: PEL13-11

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.	0.011	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 laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	27.6	0.033	0.20

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

Sample Description: WS-011(1.5-2.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180725
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 11:10 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29111 SDG#: PEL13-11

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	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0165	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
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	0.0019 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132422AA	08/31/2013 01:01	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/31/2013 01:01	Sara E Johnson	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132421848001	09/04/2013 21:23	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAD026	09/03/2013 17:10	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 05:09	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132421848001	09/03/2013 19:59	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132421848001	09/03/2013 19:59	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132421848001	09/03/2013 19:59	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132421848001	09/03/2013 19:59	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132421848001	09/03/2013 19:59	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132421848001	09/03/2013 19:59	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132421848001	09/03/2013 19:59	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132421848001	09/03/2013 19:59	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132421848001	09/03/2013 19:59	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132421848001	09/03/2013 19:59	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132421848001	09/03/2013 19:59	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132425713003	09/01/2013 06:32	Damary Valentin	1

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

Sample Description: WS-011(1.5-2.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180725
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 11:10 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29111 SDG#: PEL13-11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132421848001	09/03/2013 10:50	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132425713003	08/31/2013 09:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13248807902A	09/05/2013 17:04	Michelle L Lalli	1

Sample Description: WS-011(5.0-5.5)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180726
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 11:20 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29112 SDG#: PEL13-12

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)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180726
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 11:20 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29112 SDG#: PEL13-12

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.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	27.9	0.033	0.20

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

Sample Description: WS-011(5.0-5.5)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180726
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 11:20 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29112 SDG#: PEL13-12

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	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0201	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.34	0.0334	0.200	1
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	2.92	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	G132422AA	08/31/2013 01:22	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/31/2013 01:22	Sara E Johnson	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132421848001	09/04/2013 21:53	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAD026	09/03/2013 17:10	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 05:09	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132421848001	09/03/2013 20:10	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132421848001	09/03/2013 20:10	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132421848001	09/03/2013 20:10	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132421848001	09/03/2013 20:10	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132421848001	09/03/2013 20:10	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132421848001	09/03/2013 20:10	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132421848001	09/03/2013 20:10	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132421848001	09/03/2013 20:10	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132421848001	09/03/2013 20:10	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132421848001	09/03/2013 20:10	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132421848001	09/03/2013 20:10	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132425713003	09/01/2013 06:38	Damary Valentin	1

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

Sample Description: WS-011(5.0-5.5)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180726
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 11:20 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29112 SDG#: PEL13-12

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132421848001	09/03/2013 10:50	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132425713003	08/31/2013 09:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13248807902A	09/05/2013 17:04	Michelle L Lalli	1

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

Sample Description: WS-003(Surface)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180727
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 12:45 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/30/2013 09:30

Highlands Ranch CO 80129

Reported: 09/09/2013 10:14

29003 SDG#: PEL13-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	0.1 J	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)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180727
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 12:45 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29003 SDG#: PEL13-13

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	0.5	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	0.2 J	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	0.5	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.050	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.050	1
08357	Anthracene	120-12-7	N.D.	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.050	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.050	1
08357	Chrysene	218-01-9	N.D.	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.050	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.050	1
08357	Fluorene	86-73-7	N.D.	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	0.016 J	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	0.027 J	0.010	0.050	1
08357	Naphthalene	91-20-3	0.034 J	0.030	0.050	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.050	1
08357	Pyrene	129-00-0	N.D.	0.010	0.050	1

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

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	27.8	0.033	0.20

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

Sample Description: WS-003(Surface)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180727
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 12:45 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29003 SDG#: PEL13-13

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	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0412	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.33	0.0334	0.200	1
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	G132422AA	08/31/2013 01:44	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/31/2013 01:44	Sara E Johnson	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132421848001	09/04/2013 22:23	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAD026	09/03/2013 17:10	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 05:09	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132421848001	09/03/2013 20:13	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132421848001	09/03/2013 20:13	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132421848001	09/03/2013 20:13	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132421848001	09/03/2013 20:13	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132421848001	09/03/2013 20:13	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132421848001	09/03/2013 20:13	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132421848001	09/03/2013 20:13	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132421848001	09/03/2013 20:13	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132421848001	09/03/2013 20:13	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132421848001	09/03/2013 20:13	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132421848001	09/03/2013 20:13	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132425713003	09/01/2013 06:40	Damary Valentin	1

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

Sample Description: WS-003 (Surface) 082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180727
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 12:45 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/30/2013 09:30

Highlands Ranch CO 80129

Reported: 09/09/2013 10:14

29003 SDG#: PEL13-13

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132421848001	09/03/2013 10:50	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132425713003	08/31/2013 09:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13248807902A	09/05/2013 17:04	Michelle L Lalli	1

Sample Description: WS-007(0.5-1.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180728
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 13:05 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29007 SDG#: PEL13-14

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

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

Sample Description: WS-007(0.5-1.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180728
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 13:05 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29007 SDG#: PEL13-14

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	0.052	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	0.014 J	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 laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.						
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	16.2	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	0.0179	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1

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

Sample Description: WS-007(0.5-1.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180728
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 13:05 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29007 SDG#: PEL13-14

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	
01750	Calcium	7440-70-2	3.86	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	1.59	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						
	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	G132422AA	08/31/2013 02:06	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/31/2013 02:06	Sara E Johnson	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAD026	09/04/2013 22:52	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAD026	09/03/2013 17:10	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 05:09	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132421848001	09/03/2013 18:51	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132421848001	09/03/2013 18:51	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132421848001	09/03/2013 18:51	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132421848001	09/03/2013 18:51	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132421848001	09/03/2013 18:51	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132421848001	09/03/2013 18:51	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132421848001	09/03/2013 18:51	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132421848001	09/03/2013 18:51	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132421848001	09/03/2013 18:51	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132421848001	09/03/2013 18:51	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132421848001	09/03/2013 18:51	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132425713003	09/01/2013 06:42	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132421848001	09/03/2013 10:50	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132425713003	08/31/2013 09:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13248807902A	09/05/2013 17:04	Michelle L Lalli	1

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

Sample Description: WS-001(0.5-1.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180729
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 13:20 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29001 SDG#: PEL13-15

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

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

Sample Description: WS-001(0.5-1.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180729
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 13:20 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29001 SDG#: PEL13-15

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.	0.011	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 laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	29.9	0.033	0.20

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

Sample Description: WS-001(0.5-1.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180729
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 13:20 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29001 SDG#: PEL13-15

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	
07035	Arsenic	7440-38-2	0.0085 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0896	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.89	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	0.0048 J	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.08	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0051 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	G132422AA	08/31/2013 02:28	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/31/2013 02:28	Sara E Johnson	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132421848001	09/04/2013 23:22	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAD026	09/03/2013 17:10	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 05:09	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132421848001	09/03/2013 20:17	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132421848001	09/03/2013 20:17	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132421848001	09/03/2013 20:17	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132421848001	09/03/2013 20:17	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132421848001	09/03/2013 20:17	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132421848001	09/03/2013 20:17	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132421848001	09/03/2013 20:17	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132421848001	09/03/2013 20:17	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132421848001	09/03/2013 20:17	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132421848001	09/03/2013 20:17	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132421848001	09/03/2013 20:17	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132425713003	09/01/2013 06:44	Damary Valentin	1

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

Sample Description: WS-001(0.5-1.0)082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180729
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 13:20 by TM

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/30/2013 09:30

Highlands Ranch CO 80129

Reported: 09/09/2013 10:14

29001 SDG#: PEL13-15

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132421848001	09/03/2013 10:50	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132425713003	08/31/2013 09:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13248807902A	09/05/2013 17:04	Michelle L Lalli	1

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

Sample Description: DUP-WS-79-082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180730
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29D79 SDG#: PEL13-16FD

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-79-082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180730
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29D79 SDG#: PEL13-16FD

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	0.052	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 laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	28.9	0.033	0.20

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

Sample Description: DUP-WS-79-082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180730
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29D79 SDG#: PEL13-16FD

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	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0477	0.00033	0.0050	1
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	2.98	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0016 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		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	G132422AA	08/31/2013 02:50	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/31/2013 02:50	Sara E Johnson	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132421848001	09/04/2013 23:51	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAD026	09/03/2013 17:10	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 05:09	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132421848001	09/03/2013 20:20	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132421848001	09/03/2013 20:20	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132421848001	09/03/2013 20:20	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132421848001	09/03/2013 20:20	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132421848001	09/03/2013 20:20	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132421848001	09/03/2013 20:20	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132421848001	09/03/2013 20:20	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132421848001	09/03/2013 20:20	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132421848001	09/03/2013 20:20	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132421848001	09/03/2013 20:20	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132421848001	09/03/2013 20:20	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132425713003	09/01/2013 06:46	Damary Valentin	1

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

Sample Description: DUP-WS-79-082913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180730
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29D79 SDG#: PEL13-16FD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132421848001	09/03/2013 10:50	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132425713003	08/31/2013 09:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13248807902A	09/05/2013 17:04	Michelle L Lalli	1

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

Sample Description: WS-EB-045-082913 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180731
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 14:00 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29E45 SDG#: PEL13-17EB

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-045-082913 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180731
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 14:00 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29E45 SDG#: PEL13-17EB

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	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	0.052 J	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 laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.						
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	0.70	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	0.00098 J	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1

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

Sample Description: WS-EB-045-082913 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180731
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013 14:00 by TM

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29E45 SDG#: PEL13-17EB

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	
01750	Calcium	7440-70-2	0.207	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	0.0450 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	G132422AA	08/30/2013 19:56	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/30/2013 19:56	Sara E Johnson	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAD026	09/05/2013 00:21	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAD026	09/03/2013 17:10	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 05:09	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132421848001	09/03/2013 20:24	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132421848001	09/03/2013 20:24	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132421848001	09/03/2013 20:24	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132421848001	09/03/2013 20:24	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132421848001	09/03/2013 20:24	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132421848001	09/03/2013 20:24	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132421848001	09/03/2013 20:24	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132421848001	09/03/2013 20:24	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132421848001	09/03/2013 20:24	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132421848001	09/03/2013 20:24	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132421848001	09/03/2013 20:24	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132425713003	09/01/2013 06:48	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132421848001	09/03/2013 10:50	James L Mertzt	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132425713003	08/31/2013 09:50	Nelli S Markaryan	1

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

Sample Description: WS-TB-136-082913 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180732
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013

ExxonMobil c/o Arcadis

Submitted: 08/30/2013 09:30

630 Plaza Drive, Suite 600

Reported: 09/09/2013 10:14

Highlands Ranch CO 80129

29136 SDG#: PEL13-18TB*

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-136-082913 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7180732
LL Group # 1415365
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/29/2013

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

Submitted: 08/30/2013 09:30

Reported: 09/09/2013 10:14

29136 SDG#: PEL13-18TB*

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	G132422AA	08/30/2013 20:18	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132422AA	08/30/2013 20:18	Sara E Johnson	1

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/09/13 at 10:14 AM

Group Number: 1415365

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: G132422AA	Sample number(s): 7180715-7180732								
Acetone	N.D.	3.0	5.0	ug/l	86	85	60-139	1	30
Allyl Chloride	N.D.	0.1	0.5	ug/l	87	85	61-130	2	30
Benzene	N.D.	0.1	0.5	ug/l	102	100	80-120	2	30
Bromobenzene	N.D.	0.1	0.5	ug/l	108	109	80-120	1	30
Bromochloromethane	N.D.	0.1	0.5	ug/l	124	124	80-125	0	30
Bromodichloromethane	N.D.	0.1	0.5	ug/l	107	108	80-120	0	30
Bromoform	N.D.	0.1	0.5	ug/l	114	116	73-128	2	30
Bromomethane	N.D.	0.1	0.5	ug/l	97	94	62-126	4	30
2-Butanone	N.D.	1.0	5.0	ug/l	93	88	70-130	5	30
n-Butylbenzene	N.D.	0.1	0.5	ug/l	92	92	80-120	0	30
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	97	97	80-120	0	30
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	99	101	80-120	2	30
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	120	121	80-129	1	30
Chlorobenzene	N.D.	0.1	0.5	ug/l	110	109	80-120	1	30
Chloroethane	N.D.	0.1	0.5	ug/l	84	82	68-120	3	30
Chloroform	N.D.	0.1	0.5	ug/l	113	112	80-120	1	30
Chloromethane	N.D.	0.2	0.5	ug/l	74	71	55-120	4	30
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	100	101	80-120	1	30
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	102	99	80-120	2	30
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	122	120	64-141	1	30
Dibromochloromethane	N.D.	0.1	0.5	ug/l	108	110	80-126	2	30
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	104	104	80-120	0	30
Dibromomethane	N.D.	0.1	0.5	ug/l	110	109	80-120	1	30
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	109	111	80-120	2	30
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	109	110	80-120	0	30
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	110	109	80-120	0	30
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	86	84	39-120	2	30
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	101	100	80-120	1	30
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	120	119	80-127	1	30
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	104	102	80-123	2	30
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	106	105	80-120	1	30
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	109	106	80-120	3	30
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	109	108	75-145	1	30
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	97	97	80-120	1	30
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	94	95	80-120	1	30
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	108	108	75-122	0	30
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	109	109	80-121	0	30
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	100	101	80-123	1	30
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	94	95	80-120	1	30
Ethyl ether	N.D.	0.1	0.5	ug/l	92	91	59-130	1	30
Ethylbenzene	N.D.	0.1	0.5	ug/l	102	102	80-120	0	30
Freon 113	N.D.	0.2	0.5	ug/l	108	106	78-132	2	30
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	112	115	73-120	2	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 SummaryClient Name: ExxonMobil c/o Arcadis
Reported: 09/09/13 at 10:14 AM

Group Number: 1415365

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCS %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Isopropylbenzene	N.D.	0.1	0.5	ug/l	109	108	80-120	1	30
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	99	99	80-120	0	30
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	104	103	80-120	1	30
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	88	89	69-135	1	30
Methylene Chloride	N.D.	0.2	0.5	ug/l	102	100	80-120	2	30
n-Propylbenzene	N.D.	0.1	0.5	ug/l	93	93	80-120	0	30
Styrene	N.D.	0.1	0.5	ug/l	106	106	80-120	0	30
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	112	110	80-120	1	30
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	85	88	80-125	3	30
Tetrachloroethene	N.D.	0.1	0.5	ug/l	125*	124*	80-120	1	30
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	95	93	65-131	2	30
Toluene	N.D.	0.1	0.5	ug/l	100	100	80-120	0	30
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	101	103	63-120	3	30
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	106	109	70-120	2	30
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	118	117	80-120	1	30
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	100	99	80-120	1	30
Trichloroethene	N.D.	0.1	0.5	ug/l	113	113	80-120	0	30
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	122	120	77-132	2	30
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	102	103	80-120	1	30
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	100	100	80-120	0	30
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	98	98	80-120	0	30
Vinyl Chloride	N.D.	0.1	0.5	ug/l	86	83	65-127	3	30
Xylene (Total)	N.D.	0.1	0.5	ug/l	107	106	80-120	1	30

Batch number: 13246WAD026

Sample number(s): 7180715-7180731

Acenaphthene	N.D.	0.010	0.050	ug/l	103	105	77-118	2	30
Acenaphthylene	N.D.	0.010	0.050	ug/l	111	112	80-123	0	30
Anthracene	N.D.	0.010	0.050	ug/l	107	108	78-123	1	30
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	93	92	73-127	1	30
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	98	99	72-120	1	30
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	111	111	79-136	1	30
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	106	111	64-130	4	30
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	115	117	73-131	2	30
Chrysene	N.D.	0.010	0.050	ug/l	102	104	76-125	2	30
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	99	105	58-131	6	30
Fluoranthene	N.D.	0.010	0.050	ug/l	112	114	79-124	2	30
Fluorene	N.D.	0.010	0.050	ug/l	103	104	74-115	1	30
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	112	116	62-130	4	30
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	109	112	80-126	2	30
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	109	110	81-124	1	30
Naphthalene	N.D.	0.030	0.050	ug/l	104	106	75-120	2	30
Phenanthrene	N.D.	0.030	0.050	ug/l	105	106	75-120	0	30
Pyrene	N.D.	0.010	0.050	ug/l	99	99	71-130	0	30

Batch number: 132421848001

Sample number(s): 7180715-7180731

Arsenic	N.D.	0.0068	0.0200	mg/l	106		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	104		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	105		90-112		
Calcium	N.D.	0.0334	0.200	mg/l	101		90-110		
Chromium	N.D.	0.0016	0.0150	mg/l	101		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	101		88-110		
Magnesium	N.D.	0.0167	0.100	mg/l	99		90-110		
Nickel	N.D.	0.0015	0.0100	mg/l	106		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	102		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	113		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	98		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
Reported: 09/09/13 at 10:14 AM

Group Number: 1415365

<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: 132425713003 Mercury	Sample number(s): 7180715-7180731 N.D.	0.00006	0.00020	mg/l	102		80-120		
Batch number: 13248807902A HEM (oil & grease)	Sample number(s): 7180715-7180730 2.0 J 1.4	5.0	mg/l	93	95		78-114	2	16

Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: G132422AA	Sample number(s): 7180715-7180732 UNSPK: 7180715								
Acetone	93	98	57-163	6	30				
Allyl Chloride	90	91	56-160	1	30				
Benzene	104	104	87-126	0	30				
Bromobenzene	105	105	80-123	0	30				
Bromochloromethane	112	114	82-125	2	30				
Bromodichloromethane	104	102	82-133	2	30				
Bromoform	110	108	60-138	2	30				
Bromomethane	103	105	66-130	1	30				
2-Butanone	80	84	56-160	5	30				
n-Butylbenzene	102	102	83-131	0	30				
sec-Butylbenzene	108	107	84-128	1	30				
tert-Butylbenzene	106	106	84-135	0	30				
Carbon Tetrachloride	120	119	81-148	1	30				
Chlorobenzene	109	109	78-133	0	30				
Chloroethane	94	93	70-139	0	30				
Chloroform	109	108	86-136	0	30				
Chloromethane	81	83	49-135	2	30				
2-Chlorotoluene	105	105	75-134	0	30				
4-Chlorotoluene	101	104	76-134	3	30				
1,2-Dibromo-3-chloropropane	96	105	43-143	8	30				
Dibromochloromethane	106	104	79-125	2	30				
1,2-Dibromoethane	100	98	84-127	2	30				
Dibromomethane	104	99	83-126	4	30				
1,2-Dichlorobenzene	107	105	83-117	2	30				
1,3-Dichlorobenzene	108	108	79-132	0	30				
1,4-Dichlorobenzene	107	106	79-120	1	30				
Dichlorodifluoromethane	88	85	28-136	4	30				
1,1-Dichloroethane	103	103	88-136	0	30				
1,2-Dichloroethane	108	103	82-135	5	30				
1,1-Dichloroethene	113	111	83-150	2	30				
cis-1,2-Dichloroethene	107	108	82-129	1	30				
trans-1,2-Dichloroethene	114	111	88-127	2	30				
Dichlorofluoromethane	108	110	81-161	2	30				
1,2-Dichloropropane	100	100	91-126	0	30				
1,3-Dichloropropane	93	91	80-127	2	30				
2,2-Dichloropropane	109	108	80-134	1	30				
1,1-Dichloropropene	114	115	86-139	1	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: 1415365

Reported: 09/09/13 at 10:14 AM

Sample Matrix Quality Control

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

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
cis-1,3-Dichloropropene	101	99	74-132	2	30				
trans-1,3-Dichloropropene	94	92	71-128	2	30				
Ethyl ether	85	93	57-139	9	30				
Ethylbenzene	104	105	80-140	1	30				
Freon 113	118	110	77-147	7	30				
Hexachlorobutadiene	115	113	65-128	2	30				
Isopropylbenzene	110	110	81-133	1	30				
p-Isopropyltoluene	106	105	84-124	1	30				
Methyl Tertiary Butyl Ether	99	97	82-132	3	30				
4-Methyl-2-Pentanone	87	82	69-149	5	30				
Methylene Chloride	102	101	77-135	1	30				
n-Propylbenzene	102	102	79-131	0	30				
Styrene	105	105	63-151	0	30				
1,1,1,2-Tetrachloroethane	106	106	87-126	0	30				
1,1,2,2-Tetrachloroethane	90	89	75-131	1	30				
Tetrachloroethene	120	120	75-129	0	30				
Tetrahydrofuran	81	89	56-154	8	30				
Toluene	104	105	83-127	1	30				
1,2,3-Trichlorobenzene	98	95	73-125	3	30				
1,2,4-Trichlorobenzene	104	103	77-120	2	30				
1,1,1-Trichloroethane	116	115	85-140	1	30				
1,1,2-Trichloroethane	98	95	85-129	2	30				
Trichloroethene	115	114	85-131	1	30				
Trichlorofluoromethane	122	121	73-139	1	30				
1,2,3-Trichloropropane	99	95	76-120	4	30				
1,2,4-Trimethylbenzene	105	104	87-126	2	30				
1,3,5-Trimethylbenzene	105	104	89-129	0	30				
Vinyl Chloride	98	97	62-135	1	30				
Xylene (Total)	108	108	81-137	0	30				

Batch number: 132421848001	Sample number(s): 7180715-7180731 UNSPK: 7180728 BKG: 7180728								
Arsenic	106	108	81-123	2	20	N.D.	N.D.	0 (1)	20
Barium	102	104	78-118	2	20	0.0179	0.0177	1 (1)	20
Cadmium	103	105	83-116	2	20	N.D.	N.D.	0 (1)	20
Calcium	99	100	81-118	1	20	3.86	3.83	1	20
Chromium	98	101	81-120	3	20	N.D.	N.D.	0 (1)	20
Lead	101	104	75-125	2	20	N.D.	N.D.	0 (1)	20
Magnesium	97	99	75-125	1	20	1.59	1.58	1	20
Nickel	105	107	86-115	3	20	N.D.	N.D.	0 (1)	20
Selenium	100	102	75-125	2	20	N.D.	N.D.	0 (1)	20
Silver	109	111	75-125	2	20	N.D.	N.D.	0 (1)	20
Vanadium	96	99	90-111	3	20	N.D.	N.D.	0 (1)	20

Batch number: 132425713003	Sample number(s): 7180715-7180731 UNSPK: 7180717 BKG: 7180717								
Mercury	101	99	80-120	1	20	N.D.	N.D.	0 (1)	20

Batch number: 13248807902A	Sample number(s): 7180715-7180730 UNSPK: 7180729								
HEM (oil & grease)	89		78-114						

*- Outside of specification

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

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/09/13 at 10:14 AM

Group Number: 1415365

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: G132422AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7180715	108	104	96	95
7180716	109	104	96	96
7180717	109	104	96	96
7180718	109	105	95	95
7180719	108	104	96	96
7180720	109	103	95	95
7180721	110	103	95	95
7180722	109	105	95	95
7180723	110	105	95	94
7180724	109	103	95	95
7180725	109	104	95	94
7180726	109	103	95	94
7180727	110	104	95	95
7180728	108	103	96	95
7180729	109	103	95	94
7180730	110	105	95	95
7180731	109	107	95	95
7180732	109	105	96	95
Blank	109	106	95	95
LCS	109	103	96	95
LCSD	110	105	97	96
MS	104	103	98	97
MSD	103	100	99	97
Limits:	77-114	74-113	77-110	78-110

Analysis Name: PAHs in waters by SIM

Batch number: 13246WAD026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7180715	92	61*	105
7180716	87	60*	95
7180717	89	58*	101
7180718	75	47*	83
7180719	90	38*	104
7180720	91	35*	101
7180721	90	51*	106
7180722	83	44*	94
7180723	78	39*	89
7180724	78	25*	96
7180725	89	53*	102
7180726	73	37*	82
7180727	72	39*	80
7180728	94	88	106
7180729	87	40*	95
7180730	94	53*	106
7180731	87	88	95
Blank	85	88	91

*- Outside of specification

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

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/09/13 at 10:14 AM

Group Number: 1415365

Surrogate Quality Control

LCS	94	99	105
LCSD	95	99	108
Limits:	44-137	62-141	51-136

*- Outside of specification

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

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

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

ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # 14739 For Eurofins Lancaster Laboratories Environmental use only
Group # 1415365 Sample # 7180715-32
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 ☐ Potable ☐ Ground ☐ Water ☐ NPDES ☒ Surface ☐ Oil ☐ Air				Preservation Code													
Site Address <u>Mayflower, AR</u>				ExxonMobil PM <u>Scott Bushroe</u>				Cost Center/AFE				SCR#:				Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other					
Consultant/Office <u>ArcoDis</u>				Consultant PM <u>Steve Borrick</u>				Consultant Phone # <u>919-302-6799</u>				Total # of Containers				VOCs 8260B PAH 8270 SIM PCBs Metals + Ni, V, Cr, Mn Diss. Metals HEM Oil & Grease					
Sampler <u>Tyler Milburn / Johnny Beasley</u>				3																	
2 Sample Identification		Collected		Grab		Composite															
	Date	Time																			
WS-014(1.5-2.0)082913	8/29/13	830	✓			✓		9	✓	✓	✓	✓	✓	✓			Lab to				
WS-014(5.5-6.0)082913		840	✓			✓		9	✓	✓	✓	✓	✓	✓							
WS-012(1.5-2.0)082913		900	✓			✓		9	✓	✓	✓	✓	✓	✓							
WS-012(5.0-5.5)082913		910	✓			✓		9	✓	✓	✓	✓	✓	✓							
WS-010(1.5-2.0)082913		925	✓			✓		9	✓	✓	✓	✓	✓	✓							
WS-010(3.5-4.0)082913		935	✓			✓		9	✓	✓	✓	✓	✓	✓							
WS-006(0.5-1.0)082913		945	✓			✓		9	✓	✓	✓	✓	✓	✓							
WS-005(Surface)082913		1025	✓			✓		9	✓	✓	✓	✓	✓	✓							
WS-002(Surface)082913		1050	✓			✓		9	✓	✓	✓	✓	✓	✓							
WS-018(Surface)082913		1235	✓			✓		9	✓	✓	✓	✓	✓	✓							
WS-011(1.5-2.0)082913		1110	✓			✓		9	✓	✓	✓	✓	✓	✓							
WS-011(5.0-5.5)082913	✓	1120	✓			✓		9	✓	✓	✓	✓	✓	✓							

7 Turnaround Time Requested (TAT) (please circle)			Relinquished by <u>Tyler Milburn</u>		Date <u>8/29/13</u>	Time <u>1500</u>	Received by		Date	Time
Standard	<u>5 day</u>	4 day	Relinquished by		Date	Time	Received by		Date	Time
72 hour	48 hour	24 hour	Relinquished by		Date	Time	Received by		Date	Time
8 Data Package (circle if required)			Relinquished by Commercial Carrier		Received by		Received by		Date	Time
Type I - Full			UPS ☒ FedEx _____ Other _____		<u>CE Shlr</u>		<u>CE Shlr</u>		<u>8/30/13</u>	<u>0930</u>
Type VI (Raw Data)			Temperature Upon Receipt <u>0.5 - 1.6 °C</u>		Custody Seals Intact?		<u>Yes</u>		No	
NJ Reduced										
Other										

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

7053 0713

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Acct. # 14739 For Eurofins Lancaster Laboratories Environmental use only
Group # 1415365 Sample # 7180715-32
Instructions on reverse side correspond with circled numbers.

pg. 2 of 2

[illegible]

7053 0713

Environmental Sample Administration 1415365
Receipt Documentation LogClient/Project: May flower WaterDate of Receipt: 8/30/13Time of Receipt: 0930Source Code: 60-1Shipping Container Sealed: YES NOCustody Seal Present * : YES NO

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

Package: Chilled Not Chilled

Temperature of Shipping Containers

Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT121	0.5	TB	WI	Y	B	
2	↓	1.6	↓	↓	↓	↓	
3		1.4					
4		1.5					
5		0.9					
6		0.5					

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: CCehl 3647 Date/Time: 8/30/13 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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