

ANALYTICAL RESULTS

Prepared by:

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2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

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

November 06, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 10/30/2013

Group Number: 1430028

SDG: PEM53

PO Number: B0086003.1301

State of Sample Origin: AR

Client Sample DescriptionLancaster Labs (LL) #

WS-018(Surface)102913 Grab Surface Water	7256538
WS-003(Surface)102913 Grab Surface Water	7256539
WS-007(0.5-1.0)102913 Grab Surface Water	7256540
WS-001(0.5-1.0)102913 Grab Surface Water	7256541
WS-005(Surface)102913 Grab Surface Water	7256542
WS-014(1.5-2.0)102913 Grab Surface Water	7256543
WS-014(5.5-6.0)102913 Grab Surface Water	7256544
WS-012(1.5-2.0)102913 Grab Surface Water	7256545
WS-012(5.0-5.5)102913 Grab Surface Water	7256546
WS-010(1.5-2.0)102913 Grab Surface Water	7256547
WS-006(0.5-1.0)102913 Grab Surface Water	7256548
WS-006(0.5-1.0)102913MS Grab Surface Water	7256549
WS-006(0.5-1.0)102913MSD Grab Surface Water	7256550
WS-006(0.5-1.0)102913DUP Grab Surface Water	7256551
WS-002(Surface)102913 Grab Surface Water	7256552
WS-EB-106-102913 Grab Water	7256553
WS-TB-189-102913 Water	7256554

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

ELECTRONIC COPY TO
ARCADIS

Attn: Stephen Barrick

ELECTRONIC COPY TO
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Attn: Lyndi Mott

ELECTRONIC COPY TO
ExxonMobil

Attn: Michael J. Firth

ELECTRONIC COPY TO
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Attn: Emily Leamer

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ExxonMobil

ExxonMobil

Attn: Rhiannon Parmalee

Attn: Michael L Sixsmith

Attn: Julie Foster

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1430028

General Comments:

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

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

Project specific QC samples are included in this data set

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

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

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

Analysis Specific Comments:**SW-846 8270C SIM, GC/MS Semivolatiles**

Sample #s: 7256538, 7256539, 7256542, 7256545, 7256550

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.

Batch #: 13304WAC026 (Sample number(s): 7256538-7256550, 7256552-7256553 UNSPK: 7256548)

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

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

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7256538, 7256539, 7256542, 7256545, 7256550, MSD

SW-846 6010B, Metals

Batch #: 133031848002 (Sample number(s): 7256538-7256553 UNSPK: 7256548 BKG: 7256548)

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

EPA 1664A, Wet Chemistry

Batch #: 13309807903A (Sample number(s): 7256538-7256552 UNSPK: 7256548 BKG: 7256548)

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

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

The duplicate RPD for the following analyte(s) exceeded the acceptance window: HEM (oil & grease)

Sample Description: WS-018(Surface)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256538
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 08:40 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29018 SDG#: PEM53-01

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-018(Surface)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256538
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 08:40 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29018 SDG#: PEM53-01

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	0.051	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 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	21.7	0.033	0.20	1
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0335	0.00033	0.0050	1

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

Sample Description: WS-018(Surface)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256538
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 08:40 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29018 SDG#: PEM53-01

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	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.78	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	2.38	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	C133032AA	10/31/2013 01:07	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C133032AA	10/31/2013 01:07	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13304WAC026	11/02/2013 05:55	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13304WAC026	10/31/2013 16:15	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	133096256001	11/05/2013 07:14	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	133031848002	11/05/2013 04:54	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133031848002	11/05/2013 04:54	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133031848002	11/05/2013 04:54	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133031848002	11/05/2013 04:54	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133031848002	11/05/2013 04:54	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	133031848002	11/05/2013 04:54	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133031848002	11/05/2013 04:54	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133031848002	11/05/2013 04:54	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133031848002	11/05/2013 04:54	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133031848002	11/05/2013 04:54	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133031848002	11/05/2013 04:54	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	133035713003	10/31/2013 09:34	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133031848002	10/31/2013 08:03	James L Mertz	1

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

Sample Description: WS-018(Surface)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256538
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 08:40 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29018 SDG#: PEM53-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05713	WW SW846 Hg Digest	SW-846 7470A	1	133035713003	10/30/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13309807903A	11/05/2013 17:00	Michelle L Lalli	1

Sample Description: WS-003(Surface)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256539
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 09:00 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29003 SDG#: PEM53-02

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-003(Surface)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256539
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 09:00 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29003 SDG#: PEM53-02

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	0.1 J	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 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	21.4	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	0.0303	0.00033	0.0050	1

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

Sample Description: WS-003(Surface)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256539
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 09:00 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29003 SDG#: PEM53-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.65	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	2.37	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	C133032AA	10/31/2013 01:29	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C133032AA	10/31/2013 01:29	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13304WAC026	11/02/2013 06:25	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13304WAC026	10/31/2013 16:15	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	133096256001	11/05/2013 07:14	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	133031848002	11/05/2013 04:58	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133031848002	11/05/2013 04:58	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133031848002	11/05/2013 04:58	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133031848002	11/05/2013 04:58	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133031848002	11/05/2013 04:58	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	133031848002	11/05/2013 04:58	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133031848002	11/05/2013 04:58	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133031848002	11/05/2013 04:58	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133031848002	11/05/2013 04:58	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133031848002	11/05/2013 04:58	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133031848002	11/05/2013 04:58	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	133035713003	10/31/2013 09:36	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133031848002	10/31/2013 08:03	James L Mertz	1

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

Sample Description: WS-003 (Surface) 102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256539
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 09:00 by RL

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 10/30/2013 09:20

Highlands Ranch CO 80129

Reported: 11/06/2013 12:45

29003 SDG#: PEM53-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05713	WW SW846 Hg Digest	SW-846 7470A	1	133035713003	10/30/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13309807903A	11/05/2013 17:00	Michelle L Lalli	1

Sample Description: WS-007(0.5-1.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256540
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 09:20 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29007 SDG#: PEM53-03

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-007(0.5-1.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256540
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 09:20 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29007 SDG#: PEM53-03

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	0.052	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.052	1
08357	Anthracene	120-12-7	N.D.	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.052	1
08357	Chrysene	218-01-9	N.D.	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.052	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.052	1
08357	Fluorene	86-73-7	N.D.	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.052	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.052	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.052	1
08357	Pyrene	129-00-0	N.D.	0.010	0.052	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	19.0	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	0.0411	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.26	0.0334	0.200	1

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

Sample Description: WS-007(0.5-1.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256540
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 09:20 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29007 SDG#: PEM53-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	0.0020 J	0.0016	0.0150	1
07055	Lead	7439-92-1	0.0098 J	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.04	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0035 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.0032 J	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	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	C133032AA	10/31/2013 01:52	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C133032AA	10/31/2013 01:52	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13304WAC026	11/02/2013 06:54	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13304WAC026	10/31/2013 16:15	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	133096256001	11/05/2013 07:14	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	133031848002	11/05/2013 05:09	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133031848002	11/05/2013 05:09	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133031848002	11/05/2013 05:09	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133031848002	11/05/2013 05:09	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133031848002	11/05/2013 05:09	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	133031848002	11/05/2013 05:09	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133031848002	11/05/2013 05:09	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133031848002	11/05/2013 05:09	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133031848002	11/05/2013 05:09	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133031848002	11/05/2013 05:09	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133031848002	11/05/2013 05:09	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	133035713003	10/31/2013 09:38	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133031848002	10/31/2013 08:03	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133035713003	10/30/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13309807903A	11/05/2013 17:00	Michelle L Lalli	1

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

Sample Description: WS-001(0.5-1.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256541
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 09:30 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29001 SDG#: PEM53-04

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-001(0.5-1.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256541
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 09:30 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29001 SDG#: PEM53-04

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.	0.030	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
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	19.4	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	0.0317	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.23	0.0334	0.200	1

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

Sample Description: WS-001(0.5-1.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256541
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 09:30 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29001 SDG#: PEM53-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.14	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	C133032AA	10/31/2013 02:14	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C133032AA	10/31/2013 02:14	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13304WAC026	11/02/2013 07:23	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13304WAC026	10/31/2013 16:15	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	133096256001	11/05/2013 07:14	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	133031848002	11/05/2013 05:13	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133031848002	11/05/2013 05:13	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133031848002	11/05/2013 05:13	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133031848002	11/05/2013 05:13	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133031848002	11/05/2013 05:13	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	133031848002	11/05/2013 05:13	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133031848002	11/05/2013 05:13	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133031848002	11/05/2013 05:13	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133031848002	11/05/2013 05:13	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133031848002	11/05/2013 05:13	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133031848002	11/05/2013 05:13	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	133035713003	10/31/2013 09:44	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133031848002	10/31/2013 08:03	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133035713003	10/30/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13309807903A	11/05/2013 17:00	Michelle L Lalli	1

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

Sample Description: WS-005(Surface)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256542
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 09:50 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29005 SDG#: PEM53-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Acetone	67-64-1	3.3 J	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	0.2 J	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)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256542
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 09:50 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29005 SDG#: PEM53-05

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	0.7	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	0.6	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 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	24.2	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	0.0386	0.00033	0.0050	1

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

Sample Description: WS-005(Surface)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256542
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 09:50 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29005 SDG#: PEM53-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.58	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.49	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	C133032AA	10/31/2013 02:36	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C133032AA	10/31/2013 02:36	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13304WAC026	11/02/2013 07:52	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13304WAC026	10/31/2013 16:15	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	133096256001	11/05/2013 07:14	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	133031848002	11/05/2013 05:17	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133031848002	11/05/2013 05:17	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133031848002	11/05/2013 05:17	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133031848002	11/05/2013 05:17	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133031848002	11/05/2013 05:17	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	133031848002	11/05/2013 05:17	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133031848002	11/05/2013 05:17	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133031848002	11/05/2013 05:17	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133031848002	11/05/2013 05:17	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133031848002	11/05/2013 05:17	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133031848002	11/05/2013 05:17	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	133035713003	10/31/2013 09:46	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133031848002	10/31/2013 08:03	James L Mertz	1

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

Sample Description: WS-005(Surface)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256542
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 09:50 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29005 SDG#: PEM53-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05713	WW SW846 Hg Digest	SW-846 7470A	1	133035713003	10/30/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13309807903A	11/05/2013 17:00	Michelle L Lalli	1

Sample Description: WS-014(1.5-2.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256543
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 10:40 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29141 SDG#: PEM53-06

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-014(1.5-2.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256543
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 10:40 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29141 SDG#: PEM53-06

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	0.050	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.050	1
08357	Anthracene	120-12-7	N.D.	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.050	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.050	1
08357	Chrysene	218-01-9	N.D.	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.050	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.050	1
08357	Fluorene	86-73-7	N.D.	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.050	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.050	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.050	1
08357	Pyrene	129-00-0	N.D.	0.010	0.050	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	18.7	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0266	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.02	0.0334	0.200	1

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

Sample Description: WS-014(1.5-2.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256543
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 10:40 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29141 SDG#: PEM53-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.10	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.	3.2 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	C133032AA	10/31/2013 02:59	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C133032AA	10/31/2013 02:59	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13304WAC026	11/02/2013 08:22	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13304WAC026	10/31/2013 16:15	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	133096256001	11/05/2013 07:14	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	133031848002	11/05/2013 05:21	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133031848002	11/05/2013 05:21	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133031848002	11/05/2013 05:21	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133031848002	11/05/2013 05:21	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133031848002	11/05/2013 05:21	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	133031848002	11/05/2013 05:21	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133031848002	11/05/2013 05:21	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133031848002	11/05/2013 05:21	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133031848002	11/05/2013 05:21	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133031848002	11/05/2013 05:21	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133031848002	11/05/2013 05:21	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	133035713003	10/31/2013 09:48	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133031848002	10/31/2013 08:03	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133035713003	10/30/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13309807903A	11/05/2013 17:00	Michelle L Lalli	1

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

Sample Description: WS-014(5.5-6.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256544
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 10:50 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29142 SDG#: PEM53-07

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-014(5.5-6.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256544
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 10:50 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29142 SDG#: PEM53-07

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.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	18.2	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	0.0256	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	3.94	0.0334	0.200	1

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

Sample Description: WS-014(5.5-6.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256544
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 10:50 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29142 SDG#: PEM53-07

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	
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	2.04	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	2.8 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C133032AA	10/31/2013 03:21	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C133032AA	10/31/2013 03:21	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13304WAC026	11/02/2013 19:20	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13304WAC026	10/31/2013 16:15	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	133096256001	11/05/2013 07:14	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	133031848002	11/05/2013 05:25	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133031848002	11/05/2013 05:25	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133031848002	11/05/2013 05:25	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133031848002	11/05/2013 05:25	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133031848002	11/05/2013 05:25	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	133031848002	11/05/2013 05:25	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133031848002	11/05/2013 05:25	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133031848002	11/05/2013 05:25	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133031848002	11/05/2013 05:25	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133031848002	11/05/2013 05:25	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133031848002	11/05/2013 05:25	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	133035713003	10/31/2013 09:50	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133031848002	10/31/2013 08:03	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133035713003	10/30/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13309807903A	11/05/2013 17:00	Michelle L Lalli	1

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

Sample Description: WS-012(1.5-2.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256545
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 11:00 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29121 SDG#: PEM53-08

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-012(1.5-2.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256545
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 11:00 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29121 SDG#: PEM53-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	0.2 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	0.3 J	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 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	19.2	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	0.0251	0.00033	0.0050	1

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

Sample Description: WS-012(1.5-2.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256545
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 11:00 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29121 SDG#: PEM53-08

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	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.18	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	2.13	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.	1.8 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C133032AA	10/31/2013 03:44	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C133032AA	10/31/2013 03:44	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13304WAC026	11/02/2013 19:49	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13304WAC026	10/31/2013 16:15	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	133096256001	11/05/2013 07:14	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	133031848002	11/05/2013 05:29	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133031848002	11/05/2013 05:29	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133031848002	11/05/2013 05:29	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133031848002	11/05/2013 05:29	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133031848002	11/05/2013 05:29	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	133031848002	11/05/2013 05:29	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133031848002	11/05/2013 05:29	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133031848002	11/05/2013 05:29	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133031848002	11/05/2013 05:29	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133031848002	11/05/2013 05:29	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133031848002	11/05/2013 05:29	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	133035713003	10/31/2013 09:52	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133031848002	10/31/2013 08:03	James L Mertz	1

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

Sample Description: WS-012(1.5-2.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256545
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 11:00 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29121 SDG#: PEM53-08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05713	WW SW846 Hg Digest	SW-846 7470A	1	133035713003	10/30/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13309807903A	11/05/2013 17:00	Michelle L Lalli	1

Sample Description: WS-012(5.0-5.5)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256546
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 11:10 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29122 SDG#: PEM53-09

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

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

Sample Description: WS-012(5.0-5.5)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256546
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 11:10 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29122 SDG#: PEM53-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	0.1 J	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
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	19.0	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	0.0259	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.15	0.0334	0.200	1

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

Sample Description: WS-012(5.0-5.5)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256546
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 11:10 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29122 SDG#: PEM53-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.11	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C133032AA	10/31/2013 04:07	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C133032AA	10/31/2013 04:07	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13304WAC026	11/02/2013 20:18	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13304WAC026	10/31/2013 16:15	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	133096256001	11/05/2013 07:14	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	133031848002	11/05/2013 05:33	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133031848002	11/05/2013 05:33	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133031848002	11/05/2013 05:33	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133031848002	11/05/2013 05:33	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133031848002	11/05/2013 05:33	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	133031848002	11/05/2013 05:33	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133031848002	11/05/2013 05:33	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133031848002	11/05/2013 05:33	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133031848002	11/05/2013 05:33	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133031848002	11/05/2013 05:33	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133031848002	11/05/2013 05:33	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	133035713003	10/31/2013 09:54	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133031848002	10/31/2013 08:03	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133035713003	10/30/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13309807903A	11/05/2013 17:00	Michelle L Lalli	1

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

Sample Description: WS-010(1.5-2.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256547
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 11:30 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29010 SDG#: PEM53-10

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-010(1.5-2.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256547
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 11:30 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29010 SDG#: PEM53-10

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	0.050	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.050	1
08357	Anthracene	120-12-7	N.D.	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.050	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.050	1
08357	Chrysene	218-01-9	N.D.	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.050	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.050	1
08357	Fluorene	86-73-7	N.D.	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.050	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.050	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.050	1
08357	Pyrene	129-00-0	N.D.	0.010	0.050	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	19.0	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	0.0285	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.12	0.0334	0.200	1

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

Sample Description: WS-010(1.5-2.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256547
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 11:30 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29010 SDG#: PEM53-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.11	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C133032AA	10/31/2013 04:29	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C133032AA	10/31/2013 04:29	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13304WAC026	11/02/2013 20:48	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13304WAC026	10/31/2013 16:15	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	133096256001	11/05/2013 07:14	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	133031848002	11/05/2013 05:36	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133031848002	11/05/2013 05:36	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133031848002	11/05/2013 05:36	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133031848002	11/05/2013 05:36	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133031848002	11/05/2013 05:36	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	133031848002	11/05/2013 05:36	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133031848002	11/05/2013 05:36	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133031848002	11/05/2013 05:36	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133031848002	11/05/2013 05:36	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133031848002	11/05/2013 05:36	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133031848002	11/05/2013 05:36	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	133035713003	10/31/2013 09:56	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133031848002	10/31/2013 08:03	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133035713003	10/30/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13309807903A	11/05/2013 17:00	Michelle L Lalli	1

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

Sample Description: WS-006(0.5-1.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256548
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 12:30 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29006 SDG#: PEM53-11BKG

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)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256548
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 12:30 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29006 SDG#: PEM53-11BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.052	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.052	1
08357	Anthracene	120-12-7	N.D.	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.052	1
08357	Chrysene	218-01-9	N.D.	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.052	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.052	1
08357	Fluorene	86-73-7	N.D.	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.052	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.052	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.052	1
08357	Pyrene	129-00-0	N.D.	0.010	0.052	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	19.9	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0275	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.32	0.0334	0.200	1

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

Sample Description: WS-006(0.5-1.0)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256548
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 12:30 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29006 SDG#: PEM53-11BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	0.0050 J	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.21	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	2.2 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	C133032AA	10/30/2013 23:36	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C133032AA	10/30/2013 23:36	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13304WAC026	11/02/2013 04:28	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13304WAC026	10/31/2013 16:15	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	133096256001	11/05/2013 07:14	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	133031848002	11/05/2013 04:30	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133031848002	11/05/2013 04:30	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133031848002	11/05/2013 04:30	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133031848002	11/05/2013 04:30	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133031848002	11/05/2013 04:30	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	133031848002	11/05/2013 04:30	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133031848002	11/05/2013 04:30	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133031848002	11/05/2013 04:30	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133031848002	11/05/2013 04:30	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133031848002	11/05/2013 04:30	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133031848002	11/05/2013 04:30	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	133035713003	10/31/2013 09:58	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133031848002	10/31/2013 08:03	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133035713003	10/30/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13309807903A	11/05/2013 17:00	Michelle L Lalli	1

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

Sample Description: WS-006(0.5-1.0)102913MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256549
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 12:30 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29006 SDG#: PEM53-11MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Acetone	67-64-1	46	3.0	5.0	1
02898	Allyl Chloride	107-05-1	4.3	0.1	0.5	1
02898	Benzene	71-43-2	5.2	0.1	0.5	1
02898	Bromobenzene	108-86-1	5.4	0.1	0.5	1
02898	Bromochloromethane	74-97-5	5.7	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	5.8	0.1	0.5	1
02898	Bromoform	75-25-2	6.1	0.1	0.5	1
02898	Bromomethane	74-83-9	5.0	0.1	0.5	1
02898	2-Butanone	78-93-3	37	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	5.1	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	5.3	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	5.4	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	7.0	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.5	0.1	0.5	1
02898	Chloroethane	75-00-3	4.7	0.1	0.5	1
02898	Chloroform	67-66-3	6.0	0.1	0.5	1
02898	Chloromethane	74-87-3	4.0	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.2	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.2	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	6.1	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	5.8	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	5.3	0.1	0.5	1
02898	Dibromomethane	74-95-3	5.6	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.6	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.5	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.5	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	3.8	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.2	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	6.2	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	5.6	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	5.4	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	5.6	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	6.6	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.1	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	4.9	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	5.8	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	5.8	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	5.2	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	5.2	0.1	0.5	1
02898	Ethyl ether	60-29-7	5.1	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.3	0.1	0.5	1
02898	Freon 113	76-13-1	5.8	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	6.3	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	5.6	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	5.3	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	5.0	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	24	1.0	5.0	1
02898	Methylene Chloride	75-09-2	5.3	0.2	0.5	1

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

Sample Description: WS-006(0.5-1.0)102913MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256549
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 12:30 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29006 SDG#: PEM53-11MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	5.0	0.1	0.5	1
02898	Styrene	100-42-5	5.3	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	6.0	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	4.7	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	6.1	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	25	2.0	5.0	1
02898	Toluene	108-88-3	5.2	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	5.4	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	5.6	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	6.5	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	5.2	0.1	0.5	1
02898	Trichloroethene	79-01-6	5.9	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	6.3	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	5.3	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	5.2	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	5.2	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	4.5	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	16	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	0.85	0.010	0.051	1
08357	Acenaphthylene	208-96-8	1.0	0.010	0.051	1
08357	Anthracene	120-12-7	0.39	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.79	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.43	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.80	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.71	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.79	0.010	0.051	1
08357	Chrysene	218-01-9	0.83	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	0.73	0.010	0.051	1
08357	Fluoranthene	206-44-0	0.85	0.010	0.051	1
08357	Fluorene	86-73-7	1.0	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.73	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	1.1	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	1.0	0.010	0.051	1
08357	Naphthalene	91-20-3	0.98	0.030	0.051	1
08357	Phenanthrene	85-01-8	0.89	0.030	0.051	1
08357	Pyrene	129-00-0	0.71	0.010	0.051	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	37.7	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.155	0.0068	0.0200	1
07046	Barium	7440-39-3	2.11	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0527	0.00076	0.0050	1
01750	Calcium	7440-70-2	8.26	0.0334	0.200	1

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

Sample Description: WS-006(0.5-1.0)102913MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256549
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 12:30 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29006 SDG#: PEM53-11MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	0.209	0.0016	0.0150	1
07055	Lead	7439-92-1	0.169	0.0047	0.0150	1
01757	Magnesium	7439-95-4	4.15	0.0167	0.100	1
07061	Nickel	7440-02-0	0.538	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.158	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0484	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.514	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.0011	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	16.6	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C133032AA	10/30/2013 23:59	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C133032AA	10/30/2013 23:59	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13304WAC026	11/02/2013 04:57	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13304WAC026	10/31/2013 16:15	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	133096256001	11/05/2013 07:14	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	133031848002	11/05/2013 04:42	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133031848002	11/05/2013 04:42	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133031848002	11/05/2013 04:42	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133031848002	11/05/2013 04:42	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133031848002	11/05/2013 04:42	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	133031848002	11/05/2013 04:42	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133031848002	11/05/2013 04:42	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133031848002	11/05/2013 04:42	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133031848002	11/05/2013 04:42	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133031848002	11/05/2013 04:42	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133031848002	11/05/2013 04:42	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	133035713003	10/31/2013 10:02	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133031848002	10/31/2013 08:03	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133035713003	10/30/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13309807903A	11/05/2013 17:00	Michelle L Lalli	1

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

Sample Description: WS-006(0.5-1.0)102913MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256550
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 12:30 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29006 SDG#: PEM53-11MSD

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	41	3.0	5.0	1
02898	Allyl Chloride	107-05-1	4.5	0.1	0.5	1
02898	Benzene	71-43-2	5.1	0.1	0.5	1
02898	Bromobenzene	108-86-1	5.3	0.1	0.5	1
02898	Bromochloromethane	74-97-5	5.6	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	5.6	0.1	0.5	1
02898	Bromoform	75-25-2	5.8	0.1	0.5	1
02898	Bromomethane	74-83-9	5.1	0.1	0.5	1
02898	2-Butanone	78-93-3	34	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	5.0	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	5.2	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	5.3	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	6.8	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.4	0.1	0.5	1
02898	Chloroethane	75-00-3	4.7	0.1	0.5	1
02898	Chloroform	67-66-3	5.8	0.1	0.5	1
02898	Chloromethane	74-87-3	4.0	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.1	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.1	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	5.4	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	5.5	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	5.2	0.1	0.5	1
02898	Dibromomethane	74-95-3	5.5	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.4	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.4	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.3	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	3.7	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.1	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	6.0	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	5.4	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	5.3	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	5.6	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	6.5	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.0	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	4.8	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	5.7	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	5.7	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	5.2	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	5.0	0.1	0.5	1
02898	Ethyl ether	60-29-7	4.9	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.2	0.1	0.5	1
02898	Freon 113	76-13-1	5.7	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	6.2	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	5.4	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	5.2	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	4.9	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	24	1.0	5.0	1
02898	Methylene Chloride	75-09-2	5.2	0.2	0.5	1

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

Sample Description: WS-006(0.5-1.0)102913MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256550
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 12:30 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29006 SDG#: PEM53-11MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	5.0	0.1	0.5	1
02898	Styrene	100-42-5	5.2	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	5.8	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	4.7	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	5.9	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	23	2.0	5.0	1
02898	Toluene	108-88-3	5.0	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	5.4	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	5.4	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	6.2	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	5.1	0.1	0.5	1
02898	Trichloroethene	79-01-6	5.8	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	6.1	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	5.3	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	5.1	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	5.1	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	4.6	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	16	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	0.67	0.010	0.050	1
08357	Acenaphthylene	208-96-8	0.82	0.010	0.050	1
08357	Anthracene	120-12-7	0.24	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	0.60	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	0.28	0.010	0.050	1
08357	Benzo(b)fluoranthene	205-99-2	0.59	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	0.52	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	0.60	0.010	0.050	1
08357	Chrysene	218-01-9	0.64	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	0.56	0.010	0.050	1
08357	Fluoranthene	206-44-0	0.67	0.010	0.050	1
08357	Fluorene	86-73-7	0.79	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.56	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	0.89	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	0.86	0.010	0.050	1
08357	Naphthalene	91-20-3	0.81	0.030	0.050	1
08357	Phenanthrene	85-01-8	0.72	0.030	0.050	1
08357	Pyrene	129-00-0	0.55	0.010	0.050	1
The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.						
Metals	SM 2340 B-1997		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	37.5	0.033	0.20	1
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.156	0.0068	0.0200	1
07046	Barium	7440-39-3	2.08	0.00033	0.0050	1

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

Sample Description: WS-006(0.5-1.0)102913MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256550
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 12:30 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29006 SDG#: PEM53-11MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07049	Cadmium	7440-43-9	0.0529	0.00076	0.0050	1
01750	Calcium	7440-70-2	8.21	0.0334	0.200	1
07051	Chromium	7440-47-3	0.210	0.0016	0.0150	1
07055	Lead	7439-92-1	0.169	0.0047	0.0150	1
01757	Magnesium	7439-95-4	4.12	0.0167	0.100	1
07061	Nickel	7440-02-0	0.541	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.158	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0473	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.509	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.0011	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	26.4	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	C133032AA	10/31/2013 00:22	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C133032AA	10/31/2013 00:22	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13304WAC026	11/02/2013 05:26	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13304WAC026	10/31/2013 16:15	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	133096256001	11/05/2013 07:14	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	133031848002	11/05/2013 04:46	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133031848002	11/05/2013 04:46	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133031848002	11/05/2013 04:46	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133031848002	11/05/2013 04:46	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133031848002	11/05/2013 04:46	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	133031848002	11/05/2013 04:46	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133031848002	11/05/2013 04:46	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133031848002	11/05/2013 04:46	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133031848002	11/05/2013 04:46	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133031848002	11/05/2013 04:46	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133031848002	11/05/2013 04:46	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	133035713003	10/31/2013 10:08	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133031848002	10/31/2013 08:03	James L Mertz	1

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

Sample Description: WS-006(0.5-1.0)102913MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256550
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 12:30 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29006 SDG#: PEM53-11MSD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05713	WW SW846 Hg Digest	SW-846 7470A	1	133035713003	10/30/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13309807903A	11/05/2013 17:00	Michelle L Lalli	1

Sample Description: WS-006(0.5-1.0)102913DUP Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256551
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 12:30 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29006 SDG#: PEM53-11DUP

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SM 2340 B-1997		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	19.4	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	0.0275	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.23	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	2.15	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	2.8 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06256	Total Hardness as CaCO ₃	SM 2340 B-1997	1	133096256001	11/05/2013 07:14	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	133031848002	11/05/2013 04:38	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133031848002	11/05/2013 04:38	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133031848002	11/05/2013 04:38	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133031848002	11/05/2013 04:38	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133031848002	11/05/2013 04:38	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	133031848002	11/05/2013 04:38	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133031848002	11/05/2013 04:38	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133031848002	11/05/2013 04:38	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133031848002	11/05/2013 04:38	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133031848002	11/05/2013 04:38	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133031848002	11/05/2013 04:38	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	133035713003	10/31/2013 10:00	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133031848002	10/31/2013 08:03	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133035713003	10/30/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13309807903A	11/05/2013 17:00	Michelle L Lalli	1

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

Sample Description: WS-002(Surface)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256552
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 13:20 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29002 SDG#: PEM53-12

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-002(Surface)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256552
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 13:20 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29002 SDG#: PEM53-12

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
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	19.1	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0235	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.18	0.0334	0.200	1

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

Sample Description: WS-002(Surface)102913 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256552
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 13:20 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29002 SDG#: PEM53-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.10	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	2.1 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	C133032AA	10/31/2013 04:52	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C133032AA	10/31/2013 04:52	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13304WAC026	11/02/2013 21:17	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13304WAC026	10/31/2013 16:15	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	133096256001	11/05/2013 07:14	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	133031848002	11/05/2013 05:40	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133031848002	11/05/2013 05:40	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133031848002	11/05/2013 05:40	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133031848002	11/05/2013 05:40	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133031848002	11/05/2013 05:40	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	133031848002	11/05/2013 05:40	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133031848002	11/05/2013 05:40	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133031848002	11/05/2013 05:40	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133031848002	11/05/2013 05:40	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133031848002	11/05/2013 05:40	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133031848002	11/05/2013 05:40	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	133035713003	10/31/2013 10:10	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133031848002	10/31/2013 08:03	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133035713003	10/30/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13309807903A	11/05/2013 17:00	Michelle L Lalli	1

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

Sample Description: WS-EB-106-102913 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256553
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 14:00 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29106 SDG#: PEM53-13EB

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-106-102913 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256553
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 14:00 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29106 SDG#: PEM53-13EB

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	0.048 J	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	0.55	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	N.D.	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	0.165 J	0.0334	0.200	1

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

Sample Description: WS-EB-106-102913 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256553
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013 14:00 by RL

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

Submitted: 10/30/2013 09:20

Reported: 11/06/2013 12:45

29106 SDG#: PEM53-13EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	0.0341 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	C133032AA	10/31/2013 05:14	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C133032AA	10/31/2013 05:14	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13304WAC026	11/02/2013 21:46	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13304WAC026	10/31/2013 16:15	JoElla L Rice	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	133096256001	11/05/2013 07:14	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	133031848002	11/05/2013 05:44	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133031848002	11/05/2013 05:44	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133031848002	11/05/2013 05:44	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133031848002	11/05/2013 05:44	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133031848002	11/05/2013 05:44	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	133031848002	11/05/2013 05:44	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133031848002	11/05/2013 05:44	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133031848002	11/05/2013 05:44	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133031848002	11/05/2013 05:44	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133031848002	11/05/2013 05:44	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133031848002	11/05/2013 05:44	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	133035713003	10/31/2013 10:12	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133031848002	10/31/2013 08:03	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133035713003	10/30/2013 15:10	Nelli S Markaryan	1

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

Sample Description: WS-TB-189-102913 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256554
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013

ExxonMobil c/o Arcadis

Submitted: 10/30/2013 09:20

630 Plaza Drive, Suite 600

Reported: 11/06/2013 12:45

Highlands Ranch CO 80129

29189 SDG#: PEM53-14TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	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-189-102913 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7256554
LL Group # 1430028
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/29/2013

ExxonMobil c/o Arcadis

Submitted: 10/30/2013 09:20

630 Plaza Drive, Suite 600

Reported: 11/06/2013 12:45

Highlands Ranch CO 80129

29189 SDG#: PEM53-14TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	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	C133032AA	10/31/2013 05:37	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C133032AA	10/31/2013 05:37	Brett W Kenyon	1

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

Quality Control SummaryClient Name: ExxonMobil c/o Arcadis
Reported: 11/06/13 at 12:45 PM

Group Number: 1430028

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: C133032AA	Sample number(s): 7256538-7256550, 7256552-7256554								
Acetone	N.D.	3.0	5.0	ug/l	110		60-139		
Allyl Chloride	N.D.	0.1	0.5	ug/l	79		61-130		
Benzene	N.D.	0.1	0.5	ug/l	94		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	101		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	108		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	107		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	114		73-128		
Bromomethane	N.D.	0.1	0.5	ug/l	93		62-126		
2-Butanone	N.D.	1.0	5.0	ug/l	95		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	90		80-120		
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	93		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	95		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	117		80-129		
Chlorobenzene	N.D.	0.1	0.5	ug/l	101		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	85		68-120		
Chloroform	N.D.	0.1	0.5	ug/l	109		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	72		55-120		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	96		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	95		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	116		64-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	106		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	103		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	104		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	104		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	102		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	101		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	66		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	95		80-120		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	117		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	95		80-123		
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	97		80-120		
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	100		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	117		75-145		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	96		80-120		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	94		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	102		75-122		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	100		80-121		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	98		80-123		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	98		80-120		
Ethyl ether	N.D.	0.1	0.5	ug/l	94		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	96		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	98		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	107		73-120		

*- Outside of specification

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

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1430028

Reported: 11/06/13 at 12:45 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Isopropylbenzene	N.D.	0.1	0.5	ug/l	99		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	93		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	99		80-120		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	96		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	99		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	90		80-120		
Styrene	N.D.	0.1	0.5	ug/l	99		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	109		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	94		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	107		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	94		65-131		
Toluene	N.D.	0.1	0.5	ug/l	93		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	102		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	103		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	111		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	100		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	105		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	109		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	104		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	95		80-120		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	94		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	79		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	98		80-120		

Batch number: 13304WAC026

Sample number(s): 7256538-7256550, 7256552-7256553

Acenaphthene	N.D.	0.010	0.050	ug/l	90		77-118		
Acenaphthylene	N.D.	0.010	0.050	ug/l	97		80-123		
Anthracene	N.D.	0.010	0.050	ug/l	96		78-123		
Benzo(a)anthracene	0.021 J	0.010	0.050	ug/l	95		73-127		
Benzo(a)pyrene	0.020 J	0.010	0.050	ug/l	88		72-120		
Benzo(b)fluoranthene	0.020 J	0.010	0.050	ug/l	96		79-136		
Benzo(g,h,i)perylene	0.025 J	0.010	0.050	ug/l	92		64-130		
Benzo(k)fluoranthene	0.023 J	0.010	0.050	ug/l	101		73-131		
Chrysene	0.020 J	0.010	0.050	ug/l	94		76-125		
Dibenz(a,h)anthracene	0.025 J	0.010	0.050	ug/l	79		58-131		
Fluoranthene	0.020 J	0.010	0.050	ug/l	98		79-124		
Fluorene	N.D.	0.010	0.050	ug/l	94		74-115		
Indeno(1,2,3-cd)pyrene	0.023 J	0.010	0.050	ug/l	87		62-130		
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	104		80-126		
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	100		81-124		
Naphthalene	N.D.	0.030	0.050	ug/l	93		75-120		
Phenanthrene	N.D.	0.030	0.050	ug/l	89		75-120		
Pyrene	0.018 J	0.010	0.050	ug/l	90		71-130		

Batch number: 133031848002

Sample number(s): 7256538-7256553

Arsenic	N.D.	0.0068	0.0200	mg/l	101		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	102		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	106		90-112		
Calcium	0.0366 J	0.0334	0.200	mg/l	103		90-112		
Chromium	N.D.	0.0016	0.0150	mg/l	104		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	110		88-110		
Magnesium	N.D.	0.0167	0.100	mg/l	103		89-110		
Nickel	N.D.	0.0015	0.0100	mg/l	107		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	104		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	94		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	101		90-110		

*- Outside of specification

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1430028

Reported: 11/06/13 at 12:45 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 133035713003	Sample number(s): 7256538-7256553								
Mercury	N.D.	0.00006	0.00020	mg/l	107		80-120		
		0							
Batch number: 13309807903A	Sample number(s): 7256538-7256552								
HEM (oil & grease)	1.4	J 1.4	5.0	mg/l	84	99	78-114	16	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: C133032AA	Sample number(s): 7256538-7256550, 7256552-7256554 UNSPK: 7256548								
Acetone	124	109	57-163	12	30				
Allyl Chloride	86	89	56-160	3	30				
Benzene	104	102	87-126	2	30				
Bromobenzene	108	106	80-123	2	30				
Bromochloromethane	115	112	82-125	2	30				
Bromodichloromethane	116	112	82-133	3	30				
Bromoform	123	116	60-138	5	30				
Bromomethane	100	101	66-130	1	30				
2-Butanone	99	91	56-160	9	30				
n-Butylbenzene	103	101	83-131	2	30				
sec-Butylbenzene	105	104	84-128	1	30				
tert-Butylbenzene	107	106	84-135	1	30				
Carbon Tetrachloride	139	135	81-148	3	30				
Chlorobenzene	110	107	78-133	2	30				
Chloroethane	93	94	70-139	0	30				
Chloroform	120	117	86-136	3	30				
Chloromethane	79	80	49-135	1	30				
2-Chlorotoluene	104	102	75-134	2	30				
4-Chlorotoluene	104	103	76-134	1	30				
1,2-Dibromo-3-chloropropane	121	109	43-143	11	30				
Dibromochloromethane	116	111	79-125	5	30				
1,2-Dibromoethane	107	103	84-127	3	30				
Dibromomethane	112	109	83-126	2	30				
1,2-Dichlorobenzene	112	109	83-117	3	30				
1,3-Dichlorobenzene	110	109	79-132	1	30				
1,4-Dichlorobenzene	110	107	79-120	3	30				
Dichlorodifluoromethane	77	75	28-136	3	30				
1,1-Dichloroethane	105	103	88-136	2	30				
1,2-Dichloroethane	124	120	82-135	4	30				
1,1-Dichloroethene	111	109	83-150	2	30				
cis-1,2-Dichloroethene	108	105	82-129	2	30				
trans-1,2-Dichloroethene	113	111	88-127	1	30				
Dichlorofluoromethane	131	130	81-161	1	30				
1,2-Dichloropropane	102	100	91-126	2	30				
1,3-Dichloropropane	99	95	80-127	3	30				
2,2-Dichloropropane	116	114	80-134	1	30				
1,1-Dichloropropene	117	114	86-139	3	30				

*- Outside of specification

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

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1430028

Reported: 11/06/13 at 12:45 PM

Sample Matrix Quality Control

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

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
cis-1,3-Dichloropropene	104	103	74-132	1	30				
trans-1,3-Dichloropropene	103	101	71-128	2	30				
Ethyl ether	102	97	57-139	4	30				
Ethylbenzene	106	104	80-140	2	30				
Freon 113	116	114	77-147	2	30				
Hexachlorobutadiene	126	124	65-128	1	30				
Isopropylbenzene	111	109	81-133	2	30				
p-Isopropyltoluene	105	103	84-124	2	30				
Methyl Tertiary Butyl Ether	101	98	82-132	3	30				
4-Methyl-2-Pentanone	97	95	69-149	3	30				
Methylene Chloride	106	105	77-135	2	30				
n-Propylbenzene	101	100	79-131	1	30				
Styrene	106	104	63-151	3	30				
1,1,1,2-Tetrachloroethane	120	116	87-126	3	30				
1,1,2,2-Tetrachloroethane	95	93	75-131	2	30				
Tetrachloroethene	121	119	75-129	2	30				
Tetrahydrofuran	100	90	56-154	11	30				
Toluene	103	101	83-127	2	30				
1,2,3-Trichlorobenzene	108	108	73-125	0	30				
1,2,4-Trichlorobenzene	111	109	77-120	2	30				
1,1,1-Trichloroethane	129	125	85-140	4	30				
1,1,2-Trichloroethane	104	101	85-129	2	30				
Trichloroethene	118	116	85-131	2	30				
Trichlorofluoromethane	126	121	73-139	4	30				
1,2,3-Trichloropropane	107	106	76-120	1	30				
1,2,4-Trimethylbenzene	104	102	87-126	2	30				
1,3,5-Trimethylbenzene	103	102	89-129	2	30				
Vinyl Chloride	91	92	62-135	1	30				
Xylene (Total)	108	104	81-137	3	30				

Batch number: 13304WAC026

Sample number(s): 7256538-7256550,7256552-7256553 UNSPK: 7256548

Acenaphthene	84	67	47-136	24	30
Acenaphthylene	100	82	33-146	21	30
Anthracene	38*	24*	69-119	45*	30
Benzo(a)anthracene	78	60	37-150	27	30
Benzo(a)pyrene	43*	28*	64-123	43*	30
Benzo(b)fluoranthene	79	59	33-152	30	30
Benzo(g,h,i)perylene	70	52	36-138	30	30
Benzo(k)fluoranthene	78	60	31-142	28	30
Chrysene	82	63	34-135	26	30
Dibenz(a,h)anthracene	72	56	17-134	26	30
Fluoranthene	84	66	39-147	24	30
Fluorene	99	79	38-149	23	30
Indeno(1,2,3-cd)pyrene	72	56	29-143	26	30
1-Methylnaphthalene	105	88	49-152	18	30
2-Methylnaphthalene	104	86	51-146	20	30
Naphthalene	97	81	58-131	19	30
Phenanthrene	88	72	48-140	21	30
Pyrene	71	55*	59-125	26	30

Batch number: 133031848002

Sample number(s): 7256538-7256553 UNSPK: 7256548 BKG: 7256548

Arsenic	103	104	81-123	1	20	N.D.	N.D.	0 (1)	20
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*- 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: 1430028

Reported: 11/06/13 at 12:45 PM

Sample Matrix Quality Control

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

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup</u> <u>RPD</u> <u>Max</u>
Barium	104	103	78-118	2	20	0.0275	0.0275	0	20
Cadmium	105	106	83-116	0	20	N.D.	N.D.	0 (1)	20
Calcium	98	97	75-125	1	20	4.32	4.23	2	20
Chromium	104	105	76-120	0	20	N.D.	N.D.	0 (1)	20
Lead	109	109	75-125	0	20	0.0050 J	N.D.	200* (1)	20
Magnesium	97	96	75-125	1	20	2.21	2.15	3	20
Nickel	108	108	86-115	1	20	N.D.	N.D.	0 (1)	20
Selenium	105	105	75-125	0	20	N.D.	N.D.	0 (1)	20
Silver	97	95	75-125	2	20	N.D.	N.D.	0 (1)	20
Vanadium	103	102	90-117	1	20	N.D.	N.D.	0 (1)	20

Batch number: 133035713003

Sample number(s): 7256538-7256553 UNSPK: 7256548 BKG: 7256548

Mercury

106 111 80-120 4 20 N.D. N.D. 0 (1) 20

Batch number: 13309807903A

Sample number(s): 7256538-7256552 UNSPK: 7256548 BKG: 7256548

HEM (oil & grease)

34* 58* 78-114 45* 29 2.2 J 2.8 J 24* (1) 18

Surrogate Quality Control

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

Analysis Name: BTEX 25-ml purge

Batch number: C133032AA

Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
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7256538	107	103	96	97
7256539	109	102	95	97
7256540	108	103	95	96
7256541	109	103	96	97
7256542	108	103	95	98
7256543	108	100	95	97
7256544	108	101	95	96
7256545	109	102	95	96
7256546	109	102	95	96
7256547	109	99	95	96
7256548	110	101	95	97
7256549	108	103	96	98
7256550	108	102	95	98
7256552	109	102	95	97
7256553	110	101	95	96
7256554	109	103	94	96
Blank	106	101	96	97
LCS	107	103	96	99
MS	108	103	96	98
MSD	108	102	95	98
Limits:	77-114	74-113	77-110	78-110

*- Outside of specification

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1430028

Reported: 11/06/13 at 12:45 PM

Surrogate Quality Control

Analysis Name: PAHs in waters by SIM

Batch number: 13304WAC026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7256538	72	54*	77
7256539	60	45*	61
7256540	76	98	106
7256541	81	72	102
7256542	65	59*	71
7256543	70	67	81
7256544	94	66	98
7256545	88	48*	99
7256546	96	67	102
7256547	93	62	101
7256548	89	73	107
7256549	93	70	105
7256550	75	46*	88
7256552	92	68	103
7256553	94	93	97
Blank	109	113	115
LCS	94	95	103
MS	93	70	105
MSD	75	46*	88
Limits:	44-137	62-141	51-136

*- Outside of specification

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

eurofins

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only

Group # 1430028

Sample # 7256538-54

Instructions on reverse side correspond with circled numbers

1 of 2

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

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

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only

Group # 1430028 Sample # 7256538-54

Instructions on reverse side correspond with circled numbers

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

Kathy Klinefelter14739, 1430028, 7256538-54

From: Lewis, Ryan [Ryan.Lewis@arcadis-us.com]
Sent: Tuesday, October 29, 2013 8:39 PM
To: Van Aller, Hans; Kathy Klinefelter; Mott, Lyndi; Barrick, Stephen; Brewer, Stacey; Kull, Valerie; SA Env Entry; Capria, Dennis; Rachel L. Kreamer; McKenzie, Mary; Chandler, Jennifer; Quartey-Papafio, Clement
Cc: Molina, Joe; Lipka, Shelby; Parmelee, Rhiannon; Pritchard, Jamie
Subject: Mayflower Surface water sampling COCs/tracking numbers 102913
Attachments: UPS Tracking Numbers 10.29.2013.pdf; Surface Water COCs 10.29.2013.pdf

Hello All,

Included are the COC's and tracking numbers for today's surface water sampling event. The sampling device failed during sampling at depth. The second depth sample at WS-010 and both samples at WS-011 were unable to be sampled. A new sampling device is in transit.

Thanks,

Ryan B Lewis | Geologist 1 | ryan.lewis@arcadis-us.com

ARCADIS U.S., Inc. | 111 SW Columbia Street, Suite 670 | Portland, OR 97201
T: 503 220 8201 ext. 1101 | M: 503 863 9060
www.arcadis-us.com

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10/31/2013

Environmental Sample Administration 1430028
Receipt Documentation Log

Client/Project: Mayflower
Date of Receipt: 10/30/13
Time of Receipt: 0920
Source Code: 60-1

Shipping 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	DT146	2.0	TB	WI	Y	B	
2	↓	2.1					
3		2.5					
4		0.6					
5		0.4					
6		0.3					

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: CEH 3647Date/Time: 10/30/13 1002

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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