

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

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

October 30, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 10/22/2013

Group Number: 1428088

SDG: PEM37

PO Number: B0086003.1301

State of Sample Origin: AR

Client Sample DescriptionLancaster Labs (LL) #

WS-018(Surface)102113 Grab Surface Water	7246056
WS-003(Surface)102113 Grab Surface Water	7246057
WS-005(Surface)102113 Grab Surface Water	7246058
WS-014(1.5-2.0)102113 Grab Surface Water	7246059
WS-014(5.5-6.0)102113 Grab Surface Water	7246060
WS-012(1.5-2.0)102113 Grab Surface Water	7246061
WS-012(5.0-5.5)102113 Grab Surface Water	7246062
WS-010(1.5-2.0)102113 Grab Surface Water	7246063
WS-010(3.5-4.0)102113 Grab Surface Water	7246064
WS-006(0.5-1.0)102113 Grab Surface Water	7246065
WS-006(0.5-1.0)102113MS Grab Surface Water	7246066
WS-006(0.5-1.0)102113MSD Grab Surface Water	7246067
WS-006(0.5-1.0)102113DUP Grab Surface Water	7246068
WS-002(Surface)102113 Grab Surface Water	7246069
WS-011(1.5-2.0)102113 Grab Surface Water	7246070
WS-011(5.0-5.5)102113 Grab Surface Water	7246071
WS-007(0.5-1.0)102113 Grab Surface Water	7246072
WS-001(0.5-1.0)102113 Grab Surface Water	7246073
WS-EB-098-102113 Grab Water	7246074
WS-TB-182-102113 Water	7246075

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

ELECTRONIC ARCADIS
COPY TO
ELECTRONIC ARCADIS
COPY TO

Attn: Stephen Barrick

Attn: Lyndi Mott

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

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1428088

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: 7246061**

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

Sample #s: 7246069

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 #: 13296WAL026 (Sample number(s): 7246058-7246060, 7246062-7246067, 7246069-7246074 UNSPK: 7246065)

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

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7246069

Batch #: 13296WAV026 (Sample number(s): 7246056-7246057 UNSPK: 96WVUS)

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

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside outside acceptance windows: Dibenzo(a,h)anthracene

EPA 1664A, Wet Chemistry**Batch #: 13301807902A (Sample number(s): 7246056-7246073 UNSPK: 7246065 BKG: 7246065)**

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

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

Sample Description: WS-018(Surface)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246056
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 08:40 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21018 SDG#: PEM37-01

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)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246056
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 08:40 by CP

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 10/22/2013 09:30

Highlands Ranch CO 80129

Reported: 10/30/2013 10:29

21018 SDG#: PEM37-01

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
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	22.9	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	0.0372	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.05	0.0334	0.200	1

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

Sample Description: WS-018(Surface)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246056
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 08:40 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21018 SDG#: PEM37-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.49	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	I132962AA	10/23/2013 23:12	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/23/2013 23:12	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13296WAV026	10/29/2013 14:25	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13296WAV026	10/24/2013 08:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 07:25	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 07:25	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 07:25	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 07:25	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 07:25	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 07:25	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 07:25	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 07:25	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 07:25	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 17:27	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 17:27	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:10	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

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

Sample Description: WS-003(Surface)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246057
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 09:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21003 SDG#: PEM37-02

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)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246057
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 09:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21003 SDG#: PEM37-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	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	22.2	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	0.0387	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.84	0.0334	0.200	1

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

Sample Description: WS-003(Surface)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246057
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 09:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21003 SDG#: PEM37-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.45	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	I132962AA	10/23/2013 23:33	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/23/2013 23:33	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13296WAV026	10/29/2013 14:55	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13296WAV026	10/24/2013 08:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 07:29	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 07:29	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 07:29	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 07:29	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 07:29	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 07:29	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 07:29	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 07:29	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 07:29	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 17:30	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 17:30	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:12	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

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

Sample Description: WS-005(Surface)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246058
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 09:20 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21005 SDG#: PEM37-03

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-005(Surface)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246058
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 09:20 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21005 SDG#: PEM37-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	22.5	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	0.0237	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.00	0.0334	0.200	1

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

Sample Description: WS-005(Surface)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246058
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 09:20 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21005 SDG#: PEM37-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.44	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	I132962AA	10/23/2013 23:54	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/23/2013 23:54	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13296WAL026	10/25/2013 06:32	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13296WAL026	10/24/2013 08:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 07:40	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 07:40	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 07:40	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 07:40	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 07:40	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 07:40	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 07:40	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 07:40	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 07:40	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 17:41	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 17:41	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:14	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

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

Sample Description: WS-014(1.5-2.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246059
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 09:50 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21141 SDG#: PEM37-04

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-014(1.5-2.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246059
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 09:50 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21141 SDG#: PEM37-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
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	0.0304	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.34	0.0334	0.200	1

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

Sample Description: WS-014(1.5-2.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246059
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 09:50 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21141 SDG#: PEM37-04

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	2.20	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	1.6 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132962AA	10/24/2013 00:15	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/24/2013 00:15	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13296WAL026	10/25/2013 07:01	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13296WAL026	10/24/2013 08:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 07:43	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 07:43	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 07:43	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 07:43	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 07:43	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 07:43	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 07:43	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 07:43	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 07:43	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 17:45	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 17:45	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:16	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

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

Sample Description: WS-014(5.5-6.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246060
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21142 SDG#: PEM37-05

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 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-014(5.5-6.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246060
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21142 SDG#: PEM37-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.054	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.054	1
08357	Anthracene	120-12-7	N.D.	0.011	0.054	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.054	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.054	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.054	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.054	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.054	1
08357	Chrysene	218-01-9	N.D.	0.011	0.054	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.054	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.054	1
08357	Fluorene	86-73-7	N.D.	0.011	0.054	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.054	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.054	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.054	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.054	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.054	1
08357	Pyrene	129-00-0	N.D.	0.011	0.054	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	20.3	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0314	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.44	0.0334	0.200	1

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

Sample Description: WS-014(5.5-6.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246060
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21142 SDG#: PEM37-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.25	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	I132962AA	10/24/2013 00:36	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/24/2013 00:36	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13296WAL026	10/25/2013 07:30	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13296WAL026	10/24/2013 08:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 07:47	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 07:47	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 07:47	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 07:47	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 07:47	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 07:47	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 07:47	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 07:47	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 07:47	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 17:49	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 17:49	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:18	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

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

Sample Description: WS-012(1.5-2.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246061
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:10 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21121 SDG#: PEM37-06

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-012(1.5-2.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246061
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:10 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21121 SDG#: PEM37-06

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.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1
The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.						
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	20.6	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0307	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1

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

Sample Description: WS-012(1.5-2.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246061
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:10 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21121 SDG#: PEM37-06

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	
01750	Calcium	7440-70-2	4.53	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	2.26	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	I132962AA	10/24/2013 00:57	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/24/2013 00:57	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13299WAE026	10/28/2013 23:38	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	2	13299WAE026	10/28/2013 10:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 07:51	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 07:51	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 07:51	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 07:51	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 07:51	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 07:51	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 07:51	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 07:51	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 07:51	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 17:53	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 17:53	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:20	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-012(1.5-2.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246061
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:10 by CP

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 10/22/2013 09:30

Highlands Ranch CO 80129

Reported: 10/30/2013 10:29

21121 SDG#: PEM37-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

Sample Description: WS-012(5.0-5.5)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246062
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:20 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21122 SDG#: PEM37-07

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-012(5.0-5.5)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246062
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:20 by CP

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 10/22/2013 09:30

Highlands Ranch CO 80129

Reported: 10/30/2013 10:29

21122 SDG#: PEM37-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.052	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	21.1	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	0.0311	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.63	0.0334	0.200	1

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

Sample Description: WS-012(5.0-5.5)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246062
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:20 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21122 SDG#: PEM37-07

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	2.31	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	I132962AA	10/24/2013 01:19	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/24/2013 01:19	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13296WAL026	10/25/2013 08:27	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13296WAL026	10/24/2013 08:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 07:54	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 07:54	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 07:54	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 07:54	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 07:54	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 07:54	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 07:54	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 07:54	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 07:54	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 17:56	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 17:56	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:27	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

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

Sample Description: WS-010(1.5-2.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246063
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:40 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21101 SDG#: PEM37-08

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-010(1.5-2.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246063
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:40 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21101 SDG#: PEM37-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.050	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.050	1
08357	Anthracene	120-12-7	N.D.	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.050	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.050	1
08357	Chrysene	218-01-9	N.D.	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.050	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.050	1
08357	Fluorene	86-73-7	N.D.	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.050	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.050	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.050	1
08357	Pyrene	129-00-0	N.D.	0.010	0.050	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	21.4	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	0.0313	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.71	0.0334	0.200	1

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

Sample Description: WS-010(1.5-2.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246063
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:40 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21101 SDG#: PEM37-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.33	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132962AA	10/24/2013 01:40	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/24/2013 01:40	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13296WAL026	10/25/2013 08:56	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13296WAL026	10/24/2013 08:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 07:58	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 07:58	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 07:58	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 07:58	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 07:58	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 07:58	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 07:58	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 07:58	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 07:58	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 18:00	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 18:00	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:29	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

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

Sample Description: WS-010(3.5-4.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246064
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:50 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21102 SDG#: PEM37-09

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

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

Sample Description: WS-010(3.5-4.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246064
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:50 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21102 SDG#: PEM37-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	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	0.0323	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.79	0.0334	0.200	1

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

Sample Description: WS-010(3.5-4.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246064
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 10:50 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21102 SDG#: PEM37-09

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	2.38	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	I132962AA	10/24/2013 02:02	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/24/2013 02:02	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13296WAL026	10/25/2013 09:24	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13296WAL026	10/24/2013 08:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 08:02	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 08:02	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 08:02	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 08:02	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 08:02	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 08:02	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 08:02	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 08:02	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 08:02	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 18:04	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 18:04	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:31	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

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

Sample Description: WS-006(0.5-1.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246065
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21006 SDG#: PEM37-10BKG

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)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246065
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21006 SDG#: PEM37-10BKG

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	21.2	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	0.0302	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.67	0.0334	0.200	1

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

Sample Description: WS-006(0.5-1.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246065
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21006 SDG#: PEM37-10BKG

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	2.32	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	I132962AA	10/24/2013 02:23	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/24/2013 02:23	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13296WAL026	10/25/2013 05:06	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13296WAL026	10/24/2013 08:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 07:03	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 07:03	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 07:03	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 07:03	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 07:03	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 07:03	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 07:03	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 07:03	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 07:03	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 17:04	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 17:04	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:33	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

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

Sample Description: WS-006(0.5-1.0)102113MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246066
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21006 SDG#: PEM37-10MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Acetone	67-64-1	44	3.0	5.0	1
02898	Allyl Chloride	107-05-1	4.7	0.1	0.5	1
02898	Benzene	71-43-2	5.0	0.1	0.5	1
02898	Bromobenzene	108-86-1	4.7	0.1	0.5	1
02898	Bromochloromethane	74-97-5	4.8	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	4.9	0.1	0.5	1
02898	Bromoform	75-25-2	4.8	0.1	0.5	1
02898	Bromomethane	74-83-9	3.9	0.1	0.5	1
02898	2-Butanone	78-93-3	40	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	4.7	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	4.8	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	4.7	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	5.4	0.1	0.5	1
02898	Chlorobenzene	108-90-7	4.8	0.1	0.5	1
02898	Chloroethane	75-00-3	4.1	0.1	0.5	1
02898	Chloroform	67-66-3	5.0	0.1	0.5	1
02898	Chloromethane	74-87-3	3.9	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	4.7	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	4.7	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	4.9	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	4.8	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	4.6	0.1	0.5	1
02898	Dibromomethane	74-95-3	4.9	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	4.7	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	4.9	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	4.8	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	3.6	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	5.1	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	5.3	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	4.8	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	5.0	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	5.2	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	4.7	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	4.8	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	4.9	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	4.7	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	4.4	0.1	0.5	1
02898	Ethyl ether	60-29-7	4.6	0.1	0.5	1
02898	Ethylbenzene	100-41-4	4.8	0.1	0.5	1
02898	Freon 113	76-13-1	5.3	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	5.1	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	4.7	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	4.7	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	4.4	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	23	1.0	5.0	1
02898	Methylene Chloride	75-09-2	5.0	0.2	0.5	1

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

Sample Description: WS-006(0.5-1.0)102113MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246066
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:00 by CP

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Highlands Ranch CO 80129

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21006 SDG#: PEM37-10MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	4.8	0.1	0.5	1
02898	Styrene	100-42-5	4.6	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	4.9	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	4.6	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	5.0	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	24	2.0	5.0	1
02898	Toluene	108-88-3	4.7	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	4.3	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	4.4	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	5.1	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	4.9	0.1	0.5	1
02898	Trichloroethene	79-01-6	5.0	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	5.0	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	4.7	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	4.7	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	4.7	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	4.0	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	14	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	0.97	0.010	0.051	1
08357	Acenaphthylene	208-96-8	0.98	0.010	0.051	1
08357	Anthracene	120-12-7	0.66	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.80	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.44	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.97	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.96	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.97	0.010	0.051	1
08357	Chrysene	218-01-9	0.88	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	1.0	0.010	0.051	1
08357	Fluoranthene	206-44-0	0.97	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	0.99	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	1.1	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	1.1	0.010	0.051	1
08357	Naphthalene	91-20-3	1.1	0.030	0.051	1
08357	Phenanthrene	85-01-8	0.99	0.030	0.051	1
08357	Pyrene	129-00-0	0.91	0.010	0.051	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	39.4	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.153	0.0068	0.0200	1
07046	Barium	7440-39-3	2.08	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0505	0.00076	0.0050	1
01750	Calcium	7440-70-2	8.69	0.0334	0.200	1

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

Sample Description: WS-006(0.5-1.0)102113MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246066
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21006 SDG#: PEM37-10MS

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	0.202	0.0016	0.0150	1
07055	Lead	7439-92-1	0.158	0.0047	0.0150	1
01757	Magnesium	7439-95-4	4.30	0.0167	0.100	1
07061	Nickel	7440-02-0	0.518	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.153	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0554	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.502	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.	28.1	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132962AA	10/24/2013 02:45	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/24/2013 02:45	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13296WAL026	10/25/2013 05:35	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13296WAL026	10/24/2013 08:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 07:14	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 07:14	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 07:14	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 07:14	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 07:14	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 07:14	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 07:14	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 07:14	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 07:14	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 17:16	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 17:16	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:37	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

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

Sample Description: WS-006(0.5-1.0)102113MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246067
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:00 by CP

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 10/22/2013 09:30

Highlands Ranch CO 80129

Reported: 10/30/2013 10:29

21006 SDG#: PEM37-10MSD

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	37	3.0	5.0	1
02898	Allyl Chloride	107-05-1	4.8	0.1	0.5	1
02898	Benzene	71-43-2	5.1	0.1	0.5	1
02898	Bromobenzene	108-86-1	5.0	0.1	0.5	1
02898	Bromochloromethane	74-97-5	4.9	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	5.0	0.1	0.5	1
02898	Bromoform	75-25-2	4.9	0.1	0.5	1
02898	Bromomethane	74-83-9	4.0	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	5.1	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	5.0	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	5.5	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.0	0.1	0.5	1
02898	Chloroethane	75-00-3	4.1	0.1	0.5	1
02898	Chloroform	67-66-3	5.2	0.1	0.5	1
02898	Chloromethane	74-87-3	3.9	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.0	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.0	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	4.3	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	5.0	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	4.9	0.1	0.5	1
02898	Dibromomethane	74-95-3	5.0	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.0	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.1	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.0	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	3.6	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	5.2	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	5.5	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	5.0	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	5.2	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	5.3	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.3	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	4.9	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	5.1	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	5.2	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	4.9	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	4.7	0.1	0.5	1
02898	Ethyl ether	60-29-7	4.8	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.0	0.1	0.5	1
02898	Freon 113	76-13-1	5.4	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	5.4	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	4.9	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	5.0	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	4.7	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	25	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)102113MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246067
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:00 by CP

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 10/22/2013 09:30

Highlands Ranch CO 80129

Reported: 10/30/2013 10:29

21006 SDG#: PEM37-10MSD

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	5.1	0.1	0.5	1
02898	Styrene	100-42-5	4.7	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	5.1	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	5.0	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	5.2	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	20	2.0	5.0	1
02898	Toluene	108-88-3	4.9	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	4.8	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	4.8	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	5.3	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	5.0	0.1	0.5	1
02898	Trichloroethene	79-01-6	5.2	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	5.1	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	5.0	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	5.0	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	5.0	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	4.1	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	15	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	0.99	0.010	0.051	1
08357	Acenaphthylene	208-96-8	1.0	0.010	0.051	1
08357	Anthracene	120-12-7	0.73	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.87	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.45	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.92	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.89	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.91	0.010	0.051	1
08357	Chrysene	218-01-9	0.92	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	0.94	0.010	0.051	1
08357	Fluoranthene	206-44-0	1.0	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	0.92	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	1.1	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	1.1	0.010	0.051	1
08357	Naphthalene	91-20-3	1.1	0.031	0.051	1
08357	Phenanthrene	85-01-8	1.0	0.031	0.051	1
08357	Pyrene	129-00-0	0.97	0.010	0.051	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	39.1	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.157	0.0068	0.0200	1
07046	Barium	7440-39-3	2.08	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0511	0.00076	0.0050	1
01750	Calcium	7440-70-2	8.61	0.0334	0.200	1

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

Sample Description: WS-006(0.5-1.0)102113MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246067
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21006 SDG#: PEM37-10MSD

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	0.204	0.0016	0.0150	1
07055	Lead	7439-92-1	0.158	0.0047	0.0150	1
01757	Magnesium	7439-95-4	4.27	0.0167	0.100	1
07061	Nickel	7440-02-0	0.525	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.151	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0556	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.507	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.0010	0.000060	0.00020	1
Wet Chemistry		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	49.9	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132962AA	10/24/2013 03:06	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/24/2013 03:06	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13296WAL026	10/25/2013 06:04	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13296WAL026	10/24/2013 08:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 07:17	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 07:17	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 07:17	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 07:17	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 07:17	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 07:17	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 07:17	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 07:17	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 07:17	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 17:19	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 17:19	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:39	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

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

Sample Description: WS-006(0.5-1.0)102113DUP Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246068
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21006 SDG#: PEM37-10DUP

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	20.8	0.033	0.20	1
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0293	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.58	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	2.27	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06256	Total Hardness as CaCO ₃	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 07:10	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 07:10	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 07:10	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 07:10	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 07:10	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 07:10	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 07:10	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 07:10	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 07:10	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 17:12	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 17:12	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:35	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

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

Sample Description: WS-002(Surface)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246069
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:40 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21002 SDG#: PEM37-11

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

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

Sample Description: WS-002(Surface)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246069
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:40 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21002 SDG#: PEM37-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.052	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.052	1
08357	Anthracene	120-12-7	N.D.	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.052	1
08357	Chrysene	218-01-9	N.D.	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.052	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.052	1
08357	Fluorene	86-73-7	N.D.	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.052	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.052	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.052	1
08357	Pyrene	129-00-0	N.D.	0.010	0.052	1
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	21.0	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	0.0271	0.00033	0.0050	1

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

Sample Description: WS-002(Surface)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246069
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:40 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21002 SDG#: PEM37-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.61	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.30	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	I132962AA	10/24/2013 03:48	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/24/2013 03:48	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13296WAL026	10/25/2013 09:53	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13296WAL026	10/24/2013 08:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 08:05	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 08:05	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 08:05	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 08:05	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 08:05	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 08:05	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 08:05	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 08:05	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 08:05	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 18:07	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 18:07	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:41	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertzt	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-002(Surface)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246069
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 11:40 by CP

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 10/22/2013 09:30

Highlands Ranch CO 80129

Reported: 10/30/2013 10:29

21002 SDG#: PEM37-11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

Sample Description: WS-011(1.5-2.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246070
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 12:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21111 SDG#: PEM37-12

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

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

Sample Description: WS-011(1.5-2.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246070
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 12:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21111 SDG#: PEM37-12

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	21.9	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	0.0313	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.79	0.0334	0.200	1

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

Sample Description: WS-011(1.5-2.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246070
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 12:00 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

211111 SDG#: PEM37-12

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	2.42	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	I132962AA	10/24/2013 04:09	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/24/2013 04:09	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13296WAL026	10/25/2013 10:22	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13296WAL026	10/24/2013 08:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 08:09	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 08:09	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 08:09	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 08:09	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 08:09	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 08:09	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 08:09	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 08:09	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 08:09	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 18:11	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 18:11	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:43	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

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

Sample Description: WS-011(5.0-5.5)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246071
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 12:10 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21112 SDG#: PEM37-13

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

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

Sample Description: WS-011(5.0-5.5)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246071
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 12:10 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21112 SDG#: PEM37-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	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	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	0.0316	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.68	0.0334	0.200	1

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

Sample Description: WS-011(5.0-5.5)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246071
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 12:10 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21112 SDG#: PEM37-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
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.	1.4 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132962AA	10/24/2013 04:31	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/24/2013 04:31	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13296WAL026	10/25/2013 10:50	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13296WAL026	10/24/2013 08:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 08:13	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 08:13	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 08:13	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 08:13	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 08:13	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 08:13	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 08:13	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 08:13	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 08:13	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 18:15	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 18:15	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:45	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

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

Sample Description: WS-007(0.5-1.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246072
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 12:20 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21007 SDG#: PEM37-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Acetone	67-64-1	3.1 J	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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

Sample Description: WS-007(0.5-1.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246072
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 12:20 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21007 SDG#: PEM37-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	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	0.0088 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0525	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.58	0.0334	0.200	1

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

Sample Description: WS-007(0.5-1.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246072
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 12:20 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21007 SDG#: PEM37-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	1.93	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	1.8 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	I132962AA	10/24/2013 04:52	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/24/2013 04:52	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13296WAL026	10/25/2013 11:19	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13296WAL026	10/24/2013 08:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 08:24	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 08:24	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 08:24	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 08:24	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 08:24	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 08:24	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 08:24	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 08:24	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 08:24	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 18:26	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 18:26	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:51	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

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

Sample Description: WS-001(0.5-1.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246073
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 12:40 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21001 SDG#: PEM37-15

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

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

Sample Description: WS-001(0.5-1.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246073
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 12:40 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21001 SDG#: PEM37-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.050	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.050	1
08357	Anthracene	120-12-7	N.D.	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.050	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.050	1
08357	Chrysene	218-01-9	N.D.	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.050	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.050	1
08357	Fluorene	86-73-7	N.D.	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.050	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.050	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.050	1
08357	Pyrene	129-00-0	N.D.	0.010	0.050	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	21.0	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	0.0272	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	4.62	0.0334	0.200	1

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

Sample Description: WS-001(0.5-1.0)102113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246073
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 12:40 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21001 SDG#: PEM37-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
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	2.29	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	2.4 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132962AA	10/24/2013 05:13	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/24/2013 05:13	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13296WAL026	10/25/2013 16:36	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13296WAL026	10/24/2013 08:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132996256001	10/26/2013 09:43	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 08:28	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 08:28	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 08:28	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 08:28	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 08:28	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 08:28	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 08:28	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 08:28	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 08:28	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 18:29	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 18:29	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:53	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13301807902A	10/28/2013 17:55	Michelle L Lalli	1

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

Sample Description: WS-EB-098-102113 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246074
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 13:30 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21E98 SDG#: PEM37-16EB

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

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

Sample Description: WS-EB-098-102113 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246074
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 13:30 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21E98 SDG#: PEM37-16EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	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	0.20	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	N.D.	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	0.0816 J	0.0334	0.200	1

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

Sample Description: WS-EB-098-102113 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246074
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013 13:30 by CP

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21E98 SDG#: PEM37-16EB

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

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132962AA	10/24/2013 05:34	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/24/2013 05:34	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13296WAL026	10/25/2013 17:04	Chad A Moline	1
10470	BNP Water Extraction (SIM)	SW-846 3510C	1	13296WAL026	10/24/2013 08:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	133006256001	10/27/2013 06:27	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132951848003	10/26/2013 18:33	John P Hook	1
07046	Barium	SW-846 6010B	1	132951848003	10/26/2013 18:33	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132951848003	10/26/2013 18:33	John P Hook	1
01750	Calcium	SW-846 6010B	1	132951848003	10/26/2013 18:33	John P Hook	1
07051	Chromium	SW-846 6010B	1	132951848003	10/26/2013 18:33	John P Hook	1
07055	Lead	SW-846 6010B	1	132951848003	10/26/2013 18:33	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132951848003	10/26/2013 18:33	John P Hook	1
07061	Nickel	SW-846 6010B	1	132951848003	10/26/2013 18:33	John P Hook	1
07036	Selenium	SW-846 6010B	1	132951848003	10/26/2013 18:33	John P Hook	1
07066	Silver	SW-846 6010B	1	132951848003	10/26/2013 18:33	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132951848003	10/26/2013 18:33	John P Hook	1
00259	Mercury	SW-846 7470A	1	132955713009	10/24/2013 05:55	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132951848003	10/24/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132955713009	10/23/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-TB-182-102113 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246075
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013

ExxonMobil c/o Arcadis

Submitted: 10/22/2013 09:30

630 Plaza Drive, Suite 600

Reported: 10/30/2013 10:29

Highlands Ranch CO 80129

21182 SDG#: PEM37-17TB*

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

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

Sample Description: WS-TB-182-102113 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7246075
LL Group # 1428088
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/21/2013

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

Submitted: 10/22/2013 09:30

Reported: 10/30/2013 10:29

21182 SDG#: PEM37-17TB*

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

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132962AA	10/24/2013 05:55	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132962AA	10/24/2013 05:55	Brett W Kenyon	1

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 10/30/13 at 10:29 AM

Group Number: 1428088

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: I132962AA	Sample number(s): 7246056-7246067, 7246069-7246075								
Acetone	N.D.	3.0	5.0	ug/l	117		60-139		
Allyl Chloride	N.D.	0.1	0.5	ug/l	93		61-130		
Benzene	N.D.	0.1	0.5	ug/l	96		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	97		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	98		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	96		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	95		73-128		
Bromomethane	N.D.	0.1	0.5	ug/l	77		62-126		
2-Butanone	N.D.	1.0	5.0	ug/l	124		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	91		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	92		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	97		80-129		
Chlorobenzene	N.D.	0.1	0.5	ug/l	94		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	79		68-120		
Chloroform	N.D.	0.1	0.5	ug/l	98		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	75		55-120		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	95		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	95		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	112		64-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	97		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	97		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	99		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	96		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	98		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	97		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	63		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	100		80-120		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	102		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	99		80-123		
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	95		80-120		
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	97		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	98		75-145		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	101		80-120		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	97		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	90		75-122		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	93		80-121		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	96		80-123		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	92		80-120		
Ethyl ether	N.D.	0.1	0.5	ug/l	98		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	92		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	92		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	97		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: 1428088

Reported: 10/30/13 at 10:29 AM

<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	90		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	92		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	91		80-120		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	95		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	95		80-120		
Styrene	N.D.	0.1	0.5	ug/l	92		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	96		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	99		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	95		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	116		65-131		
Toluene	N.D.	0.1	0.5	ug/l	91		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	87		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	88		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	95		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	99		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	96		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	90		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	98		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	94		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	73		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	91		80-120		

Batch number: 13296WAL026

Sample number(s): 7246058-7246060, 7246062-7246067, 7246069-7246074

Acenaphthene	N.D.	0.010	0.050	ug/l	101		77-118		
Acenaphthylene	N.D.	0.010	0.050	ug/l	102		80-123		
Anthracene	N.D.	0.010	0.050	ug/l	104		78-123		
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	93		73-127		
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	100		72-120		
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	112		79-136		
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	108		64-130		
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	110		73-131		
Chrysene	N.D.	0.010	0.050	ug/l	105		76-125		
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	102		58-131		
Fluoranthene	N.D.	0.010	0.050	ug/l	101		79-124		
Fluorene	N.D.	0.010	0.050	ug/l	101		74-115		
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	104		62-130		
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	109		80-126		
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	109		81-124		
Naphthalene	N.D.	0.030	0.050	ug/l	104		75-120		
Phenanthrene	N.D.	0.030	0.050	ug/l	103		75-120		
Pyrene	N.D.	0.010	0.050	ug/l	98		71-130		

Batch number: 13296WAV026

Sample number(s): 7246056-7246057

Acenaphthene	N.D.	0.010	0.050	ug/l	107		77-118		
Acenaphthylene	N.D.	0.010	0.050	ug/l	110		80-123		
Anthracene	N.D.	0.010	0.050	ug/l	108		78-123		
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	106		73-127		
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	106		72-120		
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	110		79-136		
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	117		64-130		
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	124		73-131		
Chrysene	N.D.	0.010	0.050	ug/l	106		76-125		
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	110		58-131		
Fluoranthene	N.D.	0.010	0.050	ug/l	109		79-124		

*- Outside of specification

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

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

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

Quality Control SummaryClient Name: ExxonMobil c/o Arcadis
Reported: 10/30/13 at 10:29 AM

Group Number: 1428088

<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>
Fluorene	N.D.	0.010	0.050	ug/l	108		74-115		
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	112		62-130		
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	118		80-126		
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	116		81-124		
Naphthalene	N.D.	0.030	0.050	ug/l	105		75-120		
Phenanthrene	N.D.	0.030	0.050	ug/l	102		75-120		
Pyrene	N.D.	0.010	0.050	ug/l	104		71-130		

Batch number: 13299WAE026	Sample number(s): 7246061								
Acenaphthene	N.D.	0.010	0.050	ug/l	101	100	77-118	1	30
Acenaphthylene	N.D.	0.010	0.050	ug/l	106	104	80-123	2	30
Anthracene	N.D.	0.010	0.050	ug/l	109	105	78-123	4	30
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	101	97	73-127	4	30
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	101	97	72-120	4	30
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	109	105	79-136	4	30
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	111	106	64-130	4	30
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	113	111	73-131	2	30
Chrysene	N.D.	0.010	0.050	ug/l	105	102	76-125	2	30
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	98	103	58-131	5	30
Fluoranthene	N.D.	0.010	0.050	ug/l	105	102	79-124	3	30
Fluorene	N.D.	0.010	0.050	ug/l	104	101	74-115	3	30
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	104	103	62-130	0	30
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	113	110	80-126	2	30
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	114	111	81-124	3	30
Naphthalene	N.D.	0.030	0.050	ug/l	103	101	75-120	2	30
Phenanthrene	N.D.	0.030	0.050	ug/l	98	96	75-120	2	30
Pyrene	N.D.	0.010	0.050	ug/l	101	97	71-130	5	30

Batch number: 132951848003	Sample number(s): 7246056-7246074								
Arsenic	N.D.	0.0068	0.0200	mg/l	104		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	104		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	102		90-112		
Calcium	N.D.	0.0334	0.200	mg/l	101		90-112		
Chromium	N.D.	0.0016	0.0150	mg/l	101		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	106		88-110		
Magnesium	N.D.	0.0167	0.100	mg/l	100		89-110		
Nickel	N.D.	0.0015	0.0100	mg/l	105		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	101		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	112		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	101		90-110		

Batch number: 132955713009	Sample number(s): 7246056-7246074								
Mercury	N.D.	0.00006	0.00020	mg/l	105		80-120		
		0							

Batch number: 13301807902A	Sample number(s): 7246056-7246073								
HEM (oil & grease)	N.D.	1.4	5.0	mg/l	83	90	78-114	8	16

Sample Matrix Quality ControlUnspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

MS	MSD	MS/MSD	RPD	BKG	DUP	DUP	Dup RPD
----	-----	--------	-----	-----	-----	-----	---------

*- 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: 1428088

Reported: 10/30/13 at 10:29 AM

<u>Analysis Name</u>	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	<u>RPD</u>	<u>MAX</u>	<u>Conc</u>	<u>Conc</u>	<u>RPD</u>	<u>Max</u>
Batch number: I132962AA Sample number(s): 7246056-7246067,7246069-7246075 UNSPK: 7246065									
Acetone	116	100	57-163	15	30				
Allyl Chloride	93	97	56-160	4	30				
Benzene	99	102	87-126	3	30				
Bromobenzene	94	99	80-123	6	30				
Bromochloromethane	96	98	82-125	2	30				
Bromodichloromethane	98	100	82-133	2	30				
Bromoform	96	98	60-138	2	30				
Bromomethane	77	80	66-130	3	30				
2-Butanone	108	90	56-160	18	30				
n-Butylbenzene	95	99	83-131	5	30				
sec-Butylbenzene	96	102	84-128	5	30				
tert-Butylbenzene	93	99	84-135	6	30				
Carbon Tetrachloride	109	111	81-148	2	30				
Chlorobenzene	95	99	78-133	4	30				
Chloroethane	81	82	70-139	1	30				
Chloroform	101	104	86-136	3	30				
Chloromethane	77	78	49-135	2	30				
2-Chlorotoluene	94	99	75-134	5	30				
4-Chlorotoluene	95	100	76-134	6	30				
1,2-Dibromo-3-chloropropane	98	86	43-143	13	30				
Dibromochloromethane	96	99	79-125	3	30				
1,2-Dibromoethane	93	98	84-127	5	30				
Dibromomethane	97	100	83-126	3	30				
1,2-Dichlorobenzene	95	101	83-117	6	30				
1,3-Dichlorobenzene	97	103	79-132	6	30				
1,4-Dichlorobenzene	96	101	79-120	5	30				
Dichlorodifluoromethane	72	71	28-136	1	30				
1,1-Dichloroethane	102	105	88-136	2	30				
1,2-Dichloroethane	102	105	82-135	3	30				
1,1-Dichloroethene	107	110	83-150	3	30				
cis-1,2-Dichloroethene	96	101	82-129	5	30				
trans-1,2-Dichloroethene	101	104	88-127	3	30				
Dichlorofluoromethane	105	106	81-161	1	30				
1,2-Dichloropropane	102	106	91-126	4	30				
1,3-Dichloropropane	95	98	80-127	3	30				
2,2-Dichloropropane	97	101	80-134	5	30				
1,1-Dichloropropene	99	104	86-139	5	30				
cis-1,3-Dichloropropene	94	98	74-132	4	30				
trans-1,3-Dichloropropene	88	93	71-128	6	30				
Ethyl ether	92	97	57-139	5	30				
Ethylbenzene	95	99	80-140	4	30				
Freon 113	106	108	77-147	1	30				
Hexachlorobutadiene	102	109	65-128	7	30				
Isopropylbenzene	95	99	81-133	4	30				
p-Isopropyltoluene	94	100	84-124	5	30				
Methyl Tertiary Butyl Ether	88	94	82-132	7	30				
4-Methyl-2-Pentanone	93	100	69-149	7	30				
Methylene Chloride	101	103	77-135	2	30				
n-Propylbenzene	96	101	79-131	5	30				
Styrene	92	95	63-151	3	30				
1,1,1,2-Tetrachloroethane	97	102	87-126	5	30				
1,1,2,2-Tetrachloroethane	92	99	75-131	8	30				
Tetrachloroethene	100	103	75-129	3	30				
Tetrahydrofuran	97	81	56-154	18	30				
Toluene	94	98	83-127	4	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: 1428088

Reported: 10/30/13 at 10:29 AM

Sample Matrix Quality Control

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

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup</u> <u>RPD</u> <u>Max</u>
1,2,3-Trichlorobenzene	85	97	73-125	13	30				
1,2,4-Trichlorobenzene	88	97	77-120	10	30				
1,1,1-Trichloroethane	103	107	85-140	4	30				
1,1,2-Trichloroethane	98	101	85-129	3	30				
Trichloroethene	100	104	85-131	4	30				
Trichlorofluoromethane	101	102	73-139	1	30				
1,2,3-Trichloropropane	94	101	76-120	6	30				
1,2,4-Trimethylbenzene	94	99	87-126	6	30				
1,3,5-Trimethylbenzene	95	100	89-129	6	30				
Vinyl Chloride	79	81	62-135	2	30				
Xylene (Total)	93	97	81-137	4	30				

Batch number: 13296WAL026

Sample number(s): 7246058-7246060,7246062-7246067,7246069-7246074 UNSPK: 7246065

Acenaphthene	96	96	47-136	1	30
Acenaphthylene	96	98	33-146	3	30
Anthracene	65*	71	69-119	10	30
Benzo(a)anthracene	79	85	37-150	9	30
Benzo(a)pyrene	43*	44*	64-123	3	30
Benzo(b)fluoranthene	95	90	33-152	5	30
Benzo(g,h,i)perylene	94	86	36-138	8	30
Benzo(k)fluoranthene	96	89	31-142	6	30
Chrysene	87	89	34-135	4	30
Dibenz(a,h)anthracene	103	91	17-134	11	30
Fluoranthene	95	97	39-147	3	30
Fluorene	99	100	38-149	2	30
Indeno(1,2,3-cd)pyrene	97	90	29-143	7	30
1-Methylnaphthalene	106	108	49-152	2	30
2-Methylnaphthalene	104	105	51-146	2	30
Naphthalene	105	104	58-131	1	30
Phenanthrene	97	99	48-140	2	30
Pyrene	90	94	59-125	6	30

Batch number: 13296WAV026

Sample number(s): 7246056-7246057 UNSPK: P96WVUS

Acenaphthene	101	101	47-136	2	30
Acenaphthylene	102	107	33-146	6	30
Anthracene	60*	70	69-119	17	30
Benzo(a)anthracene	90	99	37-150	11	30
Benzo(a)pyrene	48*	45*	64-123	4	30
Benzo(b)fluoranthene	126	93	33-152	29	30
Benzo(g,h,i)perylene	112	86	36-138	25	30
Benzo(k)fluoranthene	125	93	31-142	28	30
Chrysene	88	92	34-135	5	30
Dibenz(a,h)anthracene	126	91	17-134	31*	30
Fluoranthene	88	88	39-147	1	30
Fluorene	107	107	38-149	1	30
Indeno(1,2,3-cd)pyrene	121	90	29-143	28	30
1-Methylnaphthalene	116	116	49-152	2	30
2-Methylnaphthalene	113	114	51-146	2	30
Naphthalene	107	106	58-131	0	30
Phenanthrene	97	99	48-140	3	30
Pyrene	89	94	59-125	7	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
Reported: 10/30/13 at 10:29 AM

Group Number: 1428088

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 132951848003	Sample number(s): 7246056-7246074 UNSPK: 7246065 BKG: 7246065								
Arsenic	102	105	81-123	2	20	N.D.	N.D.	0 (1)	20
Barium	103	102	78-118	0	20	0.0302	0.0293	3	20
Cadmium	101	102	83-116	1	20	N.D.	N.D.	0 (1)	20
Calcium	101	99	75-125	1	20	4.67	4.58	2	20
Chromium	101	102	76-120	1	20	N.D.	N.D.	0 (1)	20
Lead	105	105	75-125	0	20	N.D.	N.D.	0 (1)	20
Magnesium	99	98	75-125	1	20	2.32	2.27	2	20
Nickel	104	105	86-115	1	20	N.D.	N.D.	0 (1)	20
Selenium	102	101	75-125	1	20	N.D.	N.D.	0 (1)	20
Silver	111	111	75-125	0	20	N.D.	N.D.	0 (1)	20
Vanadium	100	101	90-117	1	20	N.D.	N.D.	0 (1)	20
Batch number: 132955713009	Sample number(s): 7246056-7246074 UNSPK: 7246065 BKG: 7246065								
Mercury	109	105	80-120	4	20	N.D.	N.D.	0 (1)	20
Batch number: 13301807902A	Sample number(s): 7246056-7246073 UNSPK: 7246065 BKG: 7246065								
HEM (oil & grease)	67*	120*	78-114	56*	29	N.D.	N.D.	0 (1)	18

Surrogate Quality Control

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

Analysis Name: BTEX 25-ml purge
Batch number: I132962AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7246056	105	109	95	96
7246057	104	107	96	95
7246058	105	108	95	96
7246059	104	105	95	94
7246060	106	109	96	96
7246061	105	111	95	95
7246062	105	107	95	95
7246063	106	107	96	96
7246064	105	107	96	95
7246065	106	106	96	95
7246066	105	110	96	99
7246067	104	106	97	99
7246069	104	104	96	95
7246070	104	106	96	95
7246071	105	107	96	96
7246072	104	105	96	95
7246073	105	106	96	95
7246074	105	106	96	95
7246075	106	108	96	94
Blank	103	104	96	94
LCS	104	104	97	98

*- Outside of specification

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

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 10/30/13 at 10:29 AM

Group Number: 1428088

Surrogate Quality Control

MS	105	110	96	99
MSD	104	106	97	99
Limits:	77-114	74-113	77-110	78-110

Analysis Name: PAHs in waters by SIM
Batch number: 13296WAL026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7246058	96	81	105
7246059	98	80	105
7246060	97	88	106
7246062	96	81	98
7246063	97	80	106
7246064	95	79	106
7246065	95	80	100
7246066	96	74	108
7246067	98	76	109
7246069	93	56*	104
7246070	100	71	110
7246071	97	79	104
7246072	98	77	105
7246073	80	68	80
7246074	92	99	94
Blank	93	96	104
LCS	97	107	110
MS	96	74	108
MSD	98	76	109

Limits:	44-137	62-141	51-136
---------	--------	--------	--------

Analysis Name: PAHs in waters by SIM
Batch number: 13296WAV026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7246056	103	84	113
7246057	89	85	112
Blank	105	104	112
LCS	106	113	117
MS	88	75	115
MSD	89	79	116

Limits:	44-137	62-141	51-136
---------	--------	--------	--------

Analysis Name: PAHs in waters by SIM
Batch number: 13299WAE026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7246061	100	93	107
Blank	109	113	115
LCS	101	107	114
LCSD	97	104	110

*- Outside of specification

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 10/30/13 at 10:29 AM

Group Number: 1428088

Surrogate Quality Control

Limits: 44-137

62-141

51-136

*- Outside of specification

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

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

ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only

Group # 1428088 Sample # 7246056-75

Instructions on reverse side correspond with circled numbers.

1 of 2

1 Client Information				4 Matrix				5 Analyses Requested												6 Remarks	
Facility #/SD Mayflower Pipeline Incident				☐ Sediment ☐ Potable ☐ Ground ☒ Surface ☐ NPDES ☐ Air ☐ Oil ☐ Total # of Containers				Preservation Code												SCR#: _____ Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other	
Site Address Mayflower, AR																					
ExxonMobil PM Scott Bushroe																				6 Lab to filter and pressure dss. metals upon receipt	
Consultant/Office ARCADIS																					
Consultant PM Steve Barrick																					
Consultant Phone # 919-302-6799																					
Sampler Clement Papafio / Ryan Lewis																					
2 Sample Identification			3 Collected		Grab	Composite															
	Date	Time																			
WS-018 (surface)	10-21-13	0840	X				9	X	X	X	X	X	X	X	X	X					
WS-003 (surface)	10-21-13	0900	X				9	X	X	X	X	X	X	X	X	X					
WS-005 (surface)	10-21-13	0920	X				9	X	X	X	X	X	X	X	X	X					
WS-014 (1.5-2.0)	10-21-13	0950	X				9	X	X	X	X	X	X	X	X	X					
WS-014 (5.5-6.0)	10-21-13	1000	X				9	X	X	X	X	X	X	X	X	X					
WS-012 (1.5-2.0)	10-21-13	1010	X				9	X	X	X	X	X	X	X	X	X					
WS-012 (5.0-5.5)	10-21-13	1020	X				9	X	X	X	X	X	X	X	X	X					
WS-010 (1.5-2.0)	10-21-13	1040	X				9	X	X	X	X	X	X	X	X	X					
WS-010 (3.5-4.0)	10-21-13	1050	X				9	X	X	X	X	X	X	X	X	X					
WS-006 (0.5-1.0)	10-21-13	1100	X				9	X	X	X	X	X	X	X	X	X					
WS-002 (surface)	10-21-13	1140	X				9	X	X	X	X	X	X	X	X	X					
WS-011 (1.5-2.0)	10-21-13	1200	X				9	X	X	X	X	X	X	X	X	X					

7 Turnaround Time Requested (TAT) (please circle)			Relinquished by		Date	Time	Received by		Date	Time
Standard	5 day	4 day			10-21-13	1530				
72 hour	48 hour	24 hour								
8 Data Package (circle if required)			Relinquished by Commercial Carrier				Received by		Date	Time
Type I - Full	Type VI (Raw Data)		UPS ☒ FedEx _____ Other _____						10/22/13	0930
NJ Reduced	Other _____									
9 Temperature Upon Receipt 0.3-2.3 °C			Custody Seals Intact?		Yes		No			

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.

eurofins

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only
Group # 1428088 Sample # 7246056-75
Instructions on reverse side correspond with circled numbers.

2 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.

Environmental Sample Administration
Receipt Documentation Log

1428088

Client/Project: MayflowerShipping Container Sealed: YES NODate of Receipt: 10/22/13Custody Seal Present * : YES NOTime of Receipt: 0930* Custody seal was intact unless otherwise noted in the
discrepancy sectionSource Code: 60-1Package: Chilled Not Chilled

Temperature of Shipping Containers

Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT121	1.4	TB	WI	Y	B	
2		2.3					
3		0.6					
4		0.3					
5		0.5					
6		0.4					

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: CC 3647 Date/Time: 10/22/13 1018

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.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.