

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

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

September 12, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 09/05/2013

Group Number: 1416499

SDG: PEL25

PO Number: B0086003.1301

State of Sample Origin: AR

Client Sample DescriptionLancaster Labs (LL) #

WS-014(1.5-2.0)090413 Grab Surface Water	7186248
WS-014(5.5-6.0)090413 Grab Surface Water	7186249
WS-012(1.5-2.0)090413 Grab Surface Water	7186250
WS-012(5.0-5.5)090413 Grab Surface Water	7186251
WS-010(1.5-2.0)090413 Grab Surface Water	7186252
WS-010(3.5-4.0)090413 Grab Surface Water	7186253
WS-006(0.5-1.0)090413 Grab Surface Water	7186254
WS-005(Surface)090413 Grab Surface Water	7186255
WS-002(Surface)090413 Grab Surface Water	7186256
WS-011(1.5-2.0)090413 Grab Surface Water	7186257
WS-011(5.0-5.5)090413 Grab Surface Water	7186258
WS-018(Surface)090413 Grab Surface Water	7186259
WS-003(Surface)090413 Grab Surface Water	7186260
WS-007(0.5-1.0)090413 Grab Surface Water	7186261
WS-001(0.5-1.0)090413 Grab Surface Water	7186262
WS-EB-051-090413 Grab Water	7186263
DUP-WS-82-090413 Grab Surface Water	7186264
WS-TB-140-090413 Water	7186265

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

ELECTRONIC ARCADIS

Attn: Stephen Barrick

COPY TO

ELECTRONIC ARCADIS

Attn: Lyndi Mott

COPY TO

ELECTRONIC ExxonMobil

Attn: Michael J. Firth

COPY TO

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ARCADIS
ARCADIS
ARCADIS
ExxonMobil
ExxonMobil

Attn: Emily Leamer
Attn: Rhiannon Parmalee
Attn: Jamie Pritchard
Attn: Michael L Sixsmith
Attn: Julie Foster

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1416499

General Comments:

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

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

Project specific QC samples are not included in this data set

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

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

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

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

Sample #s: 7186251, 7186255, 7186259

A positive result for residual chlorine was detected in the sample container used for analysis.

SW-846 8270C SIM, GC/MS Semivolatiles

Batch #: 13249WAA026 (Sample number(s): 7186248-7186264)

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7186254, 7186256, 7186257, 7186258, 7186259, 7186262, 7186264

Sample #s: 7186248

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

Sample #s: 7186249, 7186250, 7186251, 7186252, 7186253, 7186255, 7186260, 7186261, 7186263

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

Sample #s: 7186254, 7186256, 7186257, 7186258, 7186259, 7186262, 7186264

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

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

EPA 1664A, Wet Chemistry

Batch #: 13254807902A (Sample number(s): 7186248-7186262, 7186264 UNSPK: 7186248)

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

Sample Description: WS-014(1.5-2.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186248
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 08:50 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04141 SDG#: PEL25-01

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

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

Sample Description: WS-014(1.5-2.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186248
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 08:50 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04141 SDG#: PEL25-01

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.	0.011	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	29.9	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	0.0443	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-014(1.5-2.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186248
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 08:50 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04141 SDG#: PEL25-01

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	
01750	Calcium	7440-70-2	6.91	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.07	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	G132491AA	09/06/2013 10:51	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 10:51	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13249WAA026	09/09/2013 16:59	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13249WAA026	09/06/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132506256001	09/07/2013 07:37	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132481848003	09/06/2013 21:24	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132481848003	09/06/2013 21:24	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132481848003	09/06/2013 21:24	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	132481848003	09/06/2013 21:24	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848003	09/06/2013 21:24	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848003	09/06/2013 21:24	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132481848003	09/06/2013 21:24	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848003	09/06/2013 21:24	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132481848003	09/06/2013 21:24	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132481848003	09/06/2013 21:24	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132481848003	09/06/2013 21:24	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132485713001	09/06/2013 11:10	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848003	09/06/2013 07:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132485713001	09/05/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13254807902A	09/11/2013 07:28	Yolunder Y Bunch	1

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

Sample Description: WS-014(5.5-6.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186249
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 09:00 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04142 SDG#: PEL25-02

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

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

Sample Description: WS-014(5.5-6.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186249
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 09:00 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04142 SDG#: PEL25-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1
The 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	29.5	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	0.0498	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-014(5.5-6.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186249
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 09:00 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04142 SDG#: PEL25-02

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	
01750	Calcium	7440-70-2	6.81	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.02	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0018 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
SW-846 7470A						
			mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132491AA	09/06/2013 12:40	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 12:40	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13249WAA026	09/09/2013 17:28	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13249WAA026	09/06/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132506256001	09/07/2013 07:37	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132481848003	09/06/2013 21:28	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132481848003	09/06/2013 21:28	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132481848003	09/06/2013 21:28	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	132481848003	09/06/2013 21:28	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848003	09/06/2013 21:28	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848003	09/06/2013 21:28	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132481848003	09/06/2013 21:28	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848003	09/06/2013 21:28	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132481848003	09/06/2013 21:28	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132481848003	09/06/2013 21:28	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132481848003	09/06/2013 21:28	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132485713001	09/06/2013 11:12	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848003	09/06/2013 07:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132485713001	09/05/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13254807902A	09/11/2013 07:28	Yolunder Y Bunch	1

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

Sample Description: WS-012(1.5-2.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186250
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 09:20 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04121 SDG#: PEL25-03

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

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

Sample Description: WS-012(1.5-2.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186250
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 09:20 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04121 SDG#: PEL25-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1
The 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	30.1	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0768	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)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186250
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 09:20 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04121 SDG#: PEL25-03

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	
01750	Calcium	7440-70-2	6.98	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.07	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.	1.7 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	G132491AA	09/06/2013 13:02	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 13:02	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13249WAA026	09/09/2013 17:57	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13249WAA026	09/06/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132506256001	09/07/2013 07:37	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132481848003	09/06/2013 21:39	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132481848003	09/06/2013 21:39	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132481848003	09/06/2013 21:39	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	132481848003	09/06/2013 21:39	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848003	09/06/2013 21:39	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848003	09/06/2013 21:39	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132481848003	09/06/2013 21:39	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848003	09/06/2013 21:39	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132481848003	09/06/2013 21:39	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132481848003	09/06/2013 21:39	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132481848003	09/06/2013 21:39	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132485713001	09/06/2013 11:18	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848003	09/06/2013 07:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132485713001	09/05/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13254807902A	09/11/2013 07:28	Yolunder Y Bunch	1

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

Sample Description: WS-012(5.0-5.5)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186251
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 09:30 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04122 SDG#: PEL25-04

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

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

Sample Description: WS-012(5.0-5.5)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186251
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 09:30 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04122 SDG#: PEL25-04

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
A positive result for residual chlorine was detected in the sample container used for analysis.						
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
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	30.2	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

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

Sample Description: WS-012(5.0-5.5)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186251
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 09:30 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04122 SDG#: PEL25-04

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	
07046	Barium	7440-39-3	0.0815	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.98	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.10	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	2.9 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132491AA	09/06/2013 13:24	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 13:24	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13249WAA026	09/09/2013 18:27	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13249WAA026	09/06/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132506256001	09/07/2013 07:37	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132481848003	09/06/2013 21:43	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132481848003	09/06/2013 21:43	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132481848003	09/06/2013 21:43	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	132481848003	09/06/2013 21:43	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848003	09/06/2013 21:43	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848003	09/06/2013 21:43	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132481848003	09/06/2013 21:43	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848003	09/06/2013 21:43	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132481848003	09/06/2013 21:43	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132481848003	09/06/2013 21:43	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132481848003	09/06/2013 21:43	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132485713001	09/06/2013 11:20	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848003	09/06/2013 07:30	James L Mertz	1

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

Sample Description: WS-012(5.0-5.5)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186251
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 09:30 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04122 SDG#: PEL25-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05713	WW SW846 Hg Digest	SW-846 7470A	1	132485713001	09/05/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13254807902A	09/11/2013 07:28	Yolunder Y Bunch	1

Sample Description: WS-010(1.5-2.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186252
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 09:45 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04101 SDG#: PEL25-05

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

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

Sample Description: WS-010(1.5-2.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186252
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 09:45 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04101 SDG#: PEL25-05

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
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	30.2	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	0.0815	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-010(1.5-2.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186252
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 09:45 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04101 SDG#: PEL25-05

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	
01750	Calcium	7440-70-2	6.99	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.10	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
SW-846 7470A						
	mg/l		mg/l	mg/l		
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	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	G132491AA	09/06/2013 13:46	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 13:46	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13249WAA026	09/09/2013 18:56	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13249WAA026	09/06/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132506256001	09/07/2013 07:37	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132481848003	09/06/2013 21:46	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132481848003	09/06/2013 21:46	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132481848003	09/06/2013 21:46	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	132481848003	09/06/2013 21:46	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848003	09/06/2013 21:46	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848003	09/06/2013 21:46	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132481848003	09/06/2013 21:46	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848003	09/06/2013 21:46	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132481848003	09/06/2013 21:46	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132481848003	09/06/2013 21:46	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132481848003	09/06/2013 21:46	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132485713001	09/06/2013 11:22	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848003	09/06/2013 07:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132485713001	09/05/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13254807902A	09/11/2013 07:28	Yolunder Y Bunch	1

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

Sample Description: WS-010(3.5-4.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186253
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 09:55 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04102 SDG#: PEL25-06

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

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

Sample Description: WS-010(3.5-4.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186253
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 09:55 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04102 SDG#: PEL25-06

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	30.1	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0965	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-010(3.5-4.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186253
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 09:55 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04102 SDG#: PEL25-06

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	6.96	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.08	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0015 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
SW-846 7470A						
			mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	3.6 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132491AA	09/06/2013 14:07	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 14:07	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13249WAA026	09/09/2013 19:26	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13249WAA026	09/06/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132506256001	09/07/2013 07:37	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132481848003	09/06/2013 21:50	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132481848003	09/06/2013 21:50	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132481848003	09/06/2013 21:50	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	132481848003	09/06/2013 21:50	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848003	09/06/2013 21:50	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848003	09/06/2013 21:50	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132481848003	09/06/2013 21:50	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848003	09/06/2013 21:50	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132481848003	09/06/2013 21:50	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132481848003	09/06/2013 21:50	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132481848003	09/06/2013 21:50	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132485713001	09/06/2013 11:24	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848003	09/06/2013 07:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132485713001	09/05/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13254807902A	09/11/2013 07:28	Yolunder Y Bunch	1

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

Sample Description: WS-006(0.5-1.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186254
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 10:10 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04006 SDG#: PEL25-07

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

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

Sample Description: WS-006(0.5-1.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186254
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 10:10 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04006 SDG#: PEL25-07

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	0.1 J	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	30.0	0.033	0.20

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

Sample Description: WS-006(0.5-1.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186254
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 10:10 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04006 SDG#: PEL25-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0764	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.94	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.08	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	G132491AA	09/06/2013 14:29	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 14:29	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13249WAA026	09/09/2013 19:55	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13249WAA026	09/06/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132506256001	09/07/2013 07:37	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132481848003	09/06/2013 21:03	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132481848003	09/06/2013 21:03	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132481848003	09/06/2013 21:03	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	132481848003	09/06/2013 21:03	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848003	09/06/2013 21:03	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848003	09/06/2013 21:03	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132481848003	09/06/2013 21:03	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848003	09/06/2013 21:03	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132481848003	09/06/2013 21:03	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132481848003	09/06/2013 21:03	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132481848003	09/06/2013 21:03	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132485713001	09/06/2013 11:26	Damary Valentin	1

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

Sample Description: WS-006(0.5-1.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186254
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 10:10 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04006 SDG#: PEL25-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848003	09/06/2013 07:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132485713001	09/05/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13254807902A	09/11/2013 07:28	Yolunder Y Bunch	1

Sample Description: WS-005(Surface)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186255
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 10:55 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04005 SDG#: PEL25-08

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

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

Sample Description: WS-005(Surface)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186255
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 10:55 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04005 SDG#: PEL25-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	0.1 J	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
A positive result for residual chlorine was detected in the sample container used for analysis.						
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	0.012 J	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.						
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	33.4	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

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

Sample Description: WS-005(Surface)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186255
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 10:55 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04005 SDG#: PEL25-08

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	
07046	Barium	7440-39-3	0.103	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	8.08	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.21	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0027 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.000070 J	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	G132491AA	09/06/2013 14:51	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 14:51	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13249WAA026	09/09/2013 20:24	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13249WAA026	09/06/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132506256001	09/07/2013 07:37	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132481848003	09/06/2013 21:54	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132481848003	09/06/2013 21:54	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132481848003	09/06/2013 21:54	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	132481848003	09/06/2013 21:54	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848003	09/06/2013 21:54	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848003	09/06/2013 21:54	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132481848003	09/06/2013 21:54	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848003	09/06/2013 21:54	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132481848003	09/06/2013 21:54	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132481848003	09/06/2013 21:54	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132481848003	09/06/2013 21:54	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132485713001	09/06/2013 11:28	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848003	09/06/2013 07:30	James L Mertz	1

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

Sample Description: WS-005(Surface)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186255
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 10:55 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04005 SDG#: PEL25-08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05713	WW SW846 Hg Digest	SW-846 7470A	1	132485713001	09/05/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13254807902A	09/11/2013 07:28	Yolunder Y Bunch	1

Sample Description: WS-002(Surface)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186256
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 11:30 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04002 SDG#: PEL25-09

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

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

Sample Description: WS-002(Surface)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186256
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 11:30 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04002 SDG#: PEL25-09

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	31.3	0.033	0.20

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

Sample Description: WS-002(Surface)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186256
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 11:30 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04002 SDG#: PEL25-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0645	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.31	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.18	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	0.000064 J	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	G132491AA	09/06/2013 15:12	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 15:12	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13249WAA026	09/09/2013 20:54	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13249WAA026	09/06/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132506256001	09/07/2013 07:37	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132481848003	09/06/2013 21:57	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132481848003	09/06/2013 21:57	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132481848003	09/06/2013 21:57	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	132481848003	09/06/2013 21:57	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848003	09/06/2013 21:57	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848003	09/06/2013 21:57	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132481848003	09/06/2013 21:57	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848003	09/06/2013 21:57	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132481848003	09/06/2013 21:57	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132481848003	09/06/2013 21:57	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132481848003	09/06/2013 21:57	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132485713001	09/06/2013 11:30	Damary Valentin	1

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

Sample Description: WS-002 (Surface) 090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186256
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 11:30 by HVA

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 09/05/2013 09:40

Highlands Ranch CO 80129

Reported: 09/12/2013 10:03

04002 SDG#: PEL25-09

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848003	09/06/2013 07:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132485713001	09/05/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13254807902A	09/11/2013 07:28	Yolunder Y Bunch	1

Sample Description: WS-011(1.5-2.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186257
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 11:45 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04111 SDG#: PEL25-10

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

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

Sample Description: WS-011(1.5-2.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186257
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 11:45 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

041111 SDG#: PEL25-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	31.1	0.033	0.20

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

Sample Description: WS-011(1.5-2.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186257
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 11:45 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04111 SDG#: PEL25-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0623	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.17	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.21	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.000063 J	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	G132491AA	09/06/2013 15:34	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 15:34	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13249WAA026	09/09/2013 21:23	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13249WAA026	09/06/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132506256001	09/07/2013 07:37	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132481848003	09/06/2013 22:01	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132481848003	09/06/2013 22:01	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132481848003	09/06/2013 22:01	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	132481848003	09/06/2013 22:01	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848003	09/06/2013 22:01	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848003	09/06/2013 22:01	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132481848003	09/06/2013 22:01	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848003	09/06/2013 22:01	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132481848003	09/06/2013 22:01	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132481848003	09/06/2013 22:01	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132481848003	09/06/2013 22:01	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132485713001	09/06/2013 11:32	Damary Valentin	1

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

Sample Description: WS-011(1.5-2.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186257
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 11:45 by HVA

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 09/05/2013 09:40

Highlands Ranch CO 80129

Reported: 09/12/2013 10:03

04111 SDG#: PEL25-10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848003	09/06/2013 07:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132485713001	09/05/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13254807902A	09/11/2013 07:28	Yolunder Y Bunch	1

Sample Description: WS-011(5.0-5.5)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186258
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 11:55 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04112 SDG#: PEL25-11

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-011(5.0-5.5)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186258
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 11:55 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04112 SDG#: PEL25-11

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	31.3	0.033	0.20

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

Sample Description: WS-011(5.0-5.5)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186258
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 11:55 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04112 SDG#: PEL25-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0801	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.18	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.25	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0021 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
SW-846 7470A						
			mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.000064 J	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	G132491AA	09/06/2013 15:56	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 15:56	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13249WAA026	09/09/2013 21:53	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13249WAA026	09/06/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132506256001	09/07/2013 07:37	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132481848003	09/06/2013 22:05	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132481848003	09/06/2013 22:05	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132481848003	09/06/2013 22:05	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	132481848003	09/06/2013 22:05	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848003	09/06/2013 22:05	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848003	09/06/2013 22:05	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132481848003	09/06/2013 22:05	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848003	09/06/2013 22:05	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132481848003	09/06/2013 22:05	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132481848003	09/06/2013 22:05	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132481848003	09/06/2013 22:05	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132485713001	09/06/2013 11:35	Damary Valentin	1

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

Sample Description: WS-011(5.0-5.5)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186258
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 11:55 by HVA

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 09/05/2013 09:40

Highlands Ranch CO 80129

Reported: 09/12/2013 10:03

04112 SDG#: PEL25-11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848003	09/06/2013 07:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132485713001	09/05/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13254807902A	09/11/2013 07:28	Yolunder Y Bunch	1

Sample Description: WS-018(Surface)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186259
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 12:20 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04018 SDG#: PEL25-12

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

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

Sample Description: WS-018(Surface)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186259
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 12:20 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04018 SDG#: PEL25-12

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	0.1 J	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

A positive result for residual chlorine was detected in the sample container used for analysis.

GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1

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

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

Metals SM 2340 B-1997 mg/l mg/l mg/l

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

Sample Description: WS-018(Surface)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186259
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 12:20 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04018 SDG#: PEL25-12

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	29.9	0.033	0.20	1
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0070 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.124	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.79	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.15	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	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	G132491AA	09/06/2013 16:17	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 16:17	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13249WAA026	09/09/2013 22:22	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13249WAA026	09/06/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO ₃	SM 2340 B-1997	1	132506256001	09/07/2013 07:37	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132481848003	09/06/2013 22:09	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132481848003	09/06/2013 22:09	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132481848003	09/06/2013 22:09	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	132481848003	09/06/2013 22:09	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848003	09/06/2013 22:09	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848003	09/06/2013 22:09	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132481848003	09/06/2013 22:09	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848003	09/06/2013 22:09	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132481848003	09/06/2013 22:09	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132481848003	09/06/2013 22:09	John W Yanzuk II	1

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

Sample Description: WS-018 (Surface) 090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186259
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 12:20 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04018 SDG#: PEL25-12

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07071	Vanadium	SW-846 6010B	1	132481848003	09/06/2013 22:09	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132485713001	09/06/2013 11:37	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848003	09/06/2013 07:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132485713001	09/05/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13254807902A	09/11/2013 07:28	Yolunder Y Bunch	1

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

Sample Description: WS-003(Surface)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186260
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 12:30 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04003 SDG#: PEL25-13

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

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

Sample Description: WS-003 (Surface) 090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186260
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 12:30 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04003 SDG#: PEL25-13

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	0.019 J	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.017 J	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.029 J	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	0.029 J	0.010	0.051	1
08357	Chrysene	218-01-9	0.022 J	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	0.012 J	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.013 J	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	0.024 J	0.010	0.051	1
The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.						
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	31.4	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0485	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-003 (Surface) 090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186260
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 12:30 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04003 SDG#: PEL25-13

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	
01750	Calcium	7440-70-2	7.14	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.28	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0016 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
SW-846 7470A						
			mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132491AA	09/06/2013 16:39	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 16:39	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13249WAA026	09/09/2013 22:52	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13249WAA026	09/06/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132506256001	09/07/2013 07:37	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132481848003	09/06/2013 22:12	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132481848003	09/06/2013 22:12	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132481848003	09/06/2013 22:12	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	132481848003	09/06/2013 22:12	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848003	09/06/2013 22:12	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848003	09/06/2013 22:12	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132481848003	09/06/2013 22:12	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848003	09/06/2013 22:12	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132481848003	09/06/2013 22:12	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132481848003	09/06/2013 22:12	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132481848003	09/06/2013 22:12	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132485713001	09/06/2013 11:49	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848003	09/06/2013 07:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132485713001	09/05/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13254807902A	09/11/2013 07:28	Yolunder Y Bunch	1

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

Sample Description: WS-007(0.5-1.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186261
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 12:40 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04007 SDG#: PEL25-14

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

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

Sample Description: WS-007(0.5-1.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186261
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 12:40 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04007 SDG#: PEL25-14

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	0.017 J	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	0.011 J	0.010	0.051	1
08357	Chrysene	218-01-9	0.015 J	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	0.026 J	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	0.019 J	0.010	0.051	1
The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.						
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	17.7	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	0.0312	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1

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

Sample Description: WS-007(0.5-1.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186261
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 12:40 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04007 SDG#: PEL25-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
01750	Calcium	7440-70-2	4.13	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	1.79	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0026 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.0026 J	0.0020	0.0050	1
SW-846 7470A						
			mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.000065 J	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	G132491AA	09/06/2013 17:00	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 17:00	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13249WAA026	09/09/2013 23:21	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13249WAA026	09/06/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132506256001	09/07/2013 07:37	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132481848003	09/06/2013 22:23	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132481848003	09/06/2013 22:23	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132481848003	09/06/2013 22:23	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	132481848003	09/06/2013 22:23	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848003	09/06/2013 22:23	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848003	09/06/2013 22:23	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132481848003	09/06/2013 22:23	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848003	09/06/2013 22:23	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132481848003	09/06/2013 22:23	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132481848003	09/06/2013 22:23	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132481848003	09/06/2013 22:23	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132485713001	09/06/2013 11:51	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848003	09/06/2013 07:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132485713001	09/05/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13254807902A	09/11/2013 07:28	Yolunder Y Bunch	1

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

Sample Description: WS-001(0.5-1.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186262
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 13:00 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04001 SDG#: PEL25-15

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)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186262
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 13:00 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04001 SDG#: PEL25-15

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	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	30.5	0.033	0.20

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

Sample Description: WS-001(0.5-1.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186262
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 13:00 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04001 SDG#: PEL25-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0522	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.07	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.13	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.00015 J	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	G132491AA	09/06/2013 17:22	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 17:22	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13249WAA026	09/09/2013 23:51	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13249WAA026	09/06/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132506256001	09/07/2013 07:37	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132481848003	09/06/2013 22:27	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132481848003	09/06/2013 22:27	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132481848003	09/06/2013 22:27	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	132481848003	09/06/2013 22:27	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848003	09/06/2013 22:27	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848003	09/06/2013 22:27	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132481848003	09/06/2013 22:27	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848003	09/06/2013 22:27	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132481848003	09/06/2013 22:27	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132481848003	09/06/2013 22:27	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132481848003	09/06/2013 22:27	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132485713001	09/06/2013 11:53	Damary Valentin	1

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

Sample Description: WS-001(0.5-1.0)090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186262
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 13:00 by HVA

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 09/05/2013 09:40

Highlands Ranch CO 80129

Reported: 09/12/2013 10:03

04001 SDG#: PEL25-15

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848003	09/06/2013 07:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132485713001	09/05/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13254807902A	09/11/2013 07:28	Yolunder Y Bunch	1

Sample Description: WS-EB-051-090413 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186263
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 14:00 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04E51 SDG#: PEL25-16EB

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

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

Sample Description: WS-EB-051-090413 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186263
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 14:00 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04E51 SDG#: PEL25-16EB

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.	0.011	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	0.63	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	0.0097 J	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1

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

Sample Description: WS-EB-051-090413 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186263
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 14:00 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04E51 SDG#: PEL25-16EB

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	
01750	Calcium	7440-70-2	0.192 J	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	0.0371 J	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132491AA	09/06/2013 12:19	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 12:19	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13249WAA026	09/10/2013 15:18	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13249WAA026	09/06/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132506256001	09/07/2013 07:37	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132481848003	09/06/2013 22:30	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132481848003	09/06/2013 22:30	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132481848003	09/06/2013 22:30	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	132481848003	09/06/2013 22:30	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848003	09/06/2013 22:30	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848003	09/06/2013 22:30	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132481848003	09/06/2013 22:30	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848003	09/06/2013 22:30	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132481848003	09/06/2013 22:30	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132481848003	09/06/2013 22:30	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132481848003	09/06/2013 22:30	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132485713001	09/06/2013 11:55	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848003	09/06/2013 07:30	James L Mertzt	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132485713001	09/05/2013 16:15	Nelli S Markaryan	1

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

Sample Description: DUP-WS-82-090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186264
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04D82 SDG#: PEL25-17FD

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

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

Sample Description: DUP-WS-82-090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186264
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04D82 SDG#: PEL25-17FD

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	29.7	0.033	0.20

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

Sample Description: DUP-WS-82-090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186264
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 by HVA

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04D82 SDG#: PEL25-17FD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0724	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.85	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.05	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.	1.7 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	G132491AA	09/06/2013 17:44	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 17:44	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13249WAA026	09/10/2013 15:48	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13249WAA026	09/06/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132506256001	09/07/2013 07:37	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132481848003	09/06/2013 22:34	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	132481848003	09/06/2013 22:34	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	132481848003	09/06/2013 22:34	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	132481848003	09/06/2013 22:34	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848003	09/06/2013 22:34	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848003	09/06/2013 22:34	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132481848003	09/06/2013 22:34	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848003	09/06/2013 22:34	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132481848003	09/06/2013 22:34	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132481848003	09/06/2013 22:34	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	132481848003	09/06/2013 22:34	John W Yanzuk II	1
00259	Mercury	SW-846 7470A	1	132485713001	09/06/2013 11:57	Damary Valentin	1

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

Sample Description: DUP-WS-82-090413 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186264
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013 by HVA

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 09/05/2013 09:40

Highlands Ranch CO 80129

Reported: 09/12/2013 10:03

04D82 SDG#: PEL25-17FD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848003	09/06/2013 07:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132485713001	09/05/2013 16:15	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13254807902A	09/11/2013 07:28	Yolunder Y Bunch	1

Sample Description: WS-TB-140-090413 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186265
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013

ExxonMobil c/o Arcadis

Submitted: 09/05/2013 09:40

630 Plaza Drive, Suite 600

Reported: 09/12/2013 10:03

Highlands Ranch CO 80129

04140 SDG#: PEL25-18TB*

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

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

Sample Description: WS-TB-140-090413 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7186265
LL Group # 1416499
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/04/2013

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

Submitted: 09/05/2013 09:40

Reported: 09/12/2013 10:03

04140 SDG#: PEL25-18TB*

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

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132491AA	09/06/2013 10:30	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132491AA	09/06/2013 10:30	Jason M Long	1

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/12/13 at 10:03 AM

Group Number: 1416499

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: G132491AA	Sample number(s): 7186248-7186265								
Acetone	N.D.	3.0	5.0	ug/l	97		60-139		
Allyl Chloride	N.D.	0.1	0.5	ug/l	83		61-130		
Benzene	N.D.	0.1	0.5	ug/l	95		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	100		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	106		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	97		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	108		73-128		
Bromomethane	N.D.	0.1	0.5	ug/l	93		62-126		
2-Butanone	N.D.	1.0	5.0	ug/l	92		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	93		80-120		
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	97		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	99		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	105		80-129		
Chlorobenzene	N.D.	0.1	0.5	ug/l	103		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	82		68-120		
Chloroform	N.D.	0.1	0.5	ug/l	100		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	71		55-120		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	97		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	98		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	102		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	98		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	97		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	101		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	103		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	102		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	72		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	96		80-120		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	98		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	100		80-120		
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	103		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	97		75-145		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	94		80-120		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	89		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	98		75-122		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	102		80-121		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	95		80-123		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	91		80-120		
Ethyl ether	N.D.	0.1	0.5	ug/l	88		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	98		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	101		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	102		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: 1416499

Reported: 09/12/13 at 10:03 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	101		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	97		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	95		80-120		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	82		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	96		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	94		80-120		
Styrene	N.D.	0.1	0.5	ug/l	100		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	102		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	87		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	110		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	96		65-131		
Toluene	N.D.	0.1	0.5	ug/l	96		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	86		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	97		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	103		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	92		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	105		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	103		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	96		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	98		80-120		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	96		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	84		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	101		80-120		

Batch number: 13249WAA026	Sample number(s): 7186248-7186264								
Acenaphthene	N.D.	0.010	0.050	ug/l	104	107	77-118	2	30
Acenaphthylene	N.D.	0.010	0.050	ug/l	109	112	80-123	2	30
Anthracene	N.D.	0.010	0.050	ug/l	107	106	78-123	1	30
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	89	88	73-127	1	30
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	92	94	72-120	2	30
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	103	104	79-136	1	30
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	108	110	64-130	2	30
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	115	116	73-131	1	30
Chrysene	N.D.	0.010	0.050	ug/l	106	110	76-125	3	30
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	101	105	58-131	4	30
Fluoranthene	N.D.	0.010	0.050	ug/l	108	108	79-124	0	30
Fluorene	N.D.	0.010	0.050	ug/l	102	104	74-115	2	30
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	108	111	62-130	4	30
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	111	113	80-126	1	30
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	111	113	81-124	1	30
Naphthalene	N.D.	0.030	0.050	ug/l	104	106	75-120	2	30
Phenanthrene	N.D.	0.030	0.050	ug/l	110	105	75-120	4	30
Pyrene	N.D.	0.010	0.050	ug/l	102	102	71-130	0	30

Batch number: 132481848003	Sample number(s): 7186248-7186264								
Arsenic	N.D.	0.0068	0.0200	mg/l	102		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	101		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	102		90-112		
Calcium	0.0834 J	0.0334	0.200	mg/l	101		90-110		
Chromium	N.D.	0.0016	0.0150	mg/l	99		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	98		88-110		
Magnesium	0.0383 J	0.0167	0.100	mg/l	99		90-110		
Nickel	N.D.	0.0015	0.0100	mg/l	104		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	97		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	105		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	100		90-110		

*- Outside of specification

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

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1416499

Reported: 09/12/13 at 10:03 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>
Batch number: 132485713001	Sample number(s): 7186248-7186264								
Mercury	N.D.	0.00006	0.00020	mg/l	103		80-120		
		0							
Batch number: 13254807902A	Sample number(s): 7186248-7186262, 7186264								
HEM (oil & grease)	N.D.	1.4	5.0	mg/l	92	90	78-114	2	16

Sample Matrix Quality Control

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

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: G132491AA	Sample number(s): 7186248-7186265 UNSPK: 7186248								
Acetone	98	95	57-163	3	30				
Allyl Chloride	89	90	56-160	1	30				
Benzene	103	105	87-126	2	30				
Bromobenzene	105	106	80-123	1	30				
Bromochloromethane	108	113	82-125	4	30				
Bromodichloromethane	100	102	82-133	2	30				
Bromoform	104	109	60-138	4	30				
Bromomethane	98	97	66-130	0	30				
2-Butanone	88	86	56-160	3	30				
n-Butylbenzene	105	104	83-131	1	30				
sec-Butylbenzene	108	108	84-128	0	30				
tert-Butylbenzene	107	110	84-135	3	30				
Carbon Tetrachloride	118	119	81-148	1	30				
Chlorobenzene	109	110	78-133	1	30				
Chloroethane	90	88	70-139	2	30				
Chloroform	107	109	86-136	2	30				
Chloromethane	77	75	49-135	2	30				
2-Chlorotoluene	106	107	75-134	1	30				
4-Chlorotoluene	104	105	76-134	1	30				
1,2-Dibromo-3-chloropropane	103	112	43-143	8	30				
Dibromochloromethane	102	106	79-125	3	30				
1,2-Dibromoethane	98	100	84-127	2	30				
Dibromomethane	99	100	83-126	1	30				
1,2-Dichlorobenzene	105	108	83-117	3	30				
1,3-Dichlorobenzene	110	111	79-132	1	30				
1,4-Dichlorobenzene	108	109	79-120	0	30				
Dichlorodifluoromethane	77	69	28-136	10	30				
1,1-Dichloroethane	102	105	88-136	2	30				
1,2-Dichloroethane	101	103	82-135	2	30				
1,1-Dichloroethene	112	112	83-150	0	30				
cis-1,2-Dichloroethene	107	108	82-129	1	30				
trans-1,2-Dichloroethene	113	114	88-127	1	30				
Dichlorofluoromethane	105	103	81-161	1	30				
1,2-Dichloropropane	98	100	91-126	2	30				
1,3-Dichloropropane	91	93	80-127	2	30				
2,2-Dichloropropane	109	109	80-134	1	30				
1,1-Dichloropropene	114	114	86-139	0	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: 1416499

Reported: 09/12/13 at 10:03 AM

Sample Matrix Quality Control

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

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
cis-1,3-Dichloropropene	98	100	74-132	2	30				
trans-1,3-Dichloropropene	92	93	71-128	1	30				
Ethyl ether	85	89	57-139	5	30				
Ethylbenzene	106	107	80-140	1	30				
Freon 113	117	108	77-147	9	30				
Hexachlorobutadiene	114	117	65-128	2	30				
Isopropylbenzene	111	112	81-133	1	30				
p-Isopropyltoluene	108	108	84-124	0	30				
Methyl Tertiary Butyl Ether	95	96	82-132	1	30				
4-Methyl-2-Pentanone	82	82	69-149	1	30				
Methylene Chloride	101	102	77-135	1	30				
n-Propylbenzene	103	104	79-131	1	30				
Styrene	105	107	63-151	1	30				
1,1,1,2-Tetrachloroethane	107	107	87-126	0	30				
1,1,2,2-Tetrachloroethane	88	89	75-131	2	30				
Tetrachloroethene	122	124	75-129	1	30				
Tetrahydrofuran	90	90	56-154	1	30				
Toluene	106	107	83-127	1	30				
1,2,3-Trichlorobenzene	91	94	73-125	3	30				
1,2,4-Trichlorobenzene	100	104	77-120	4	30				
1,1,1-Trichloroethane	115	114	85-140	0	30				
1,1,2-Trichloroethane	96	96	85-129	0	30				
Trichloroethene	114	114	85-131	0	30				
Trichlorofluoromethane	116	113	73-139	3	30				
1,2,3-Trichloropropane	98	96	76-120	2	30				
1,2,4-Trimethylbenzene	106	107	87-126	1	30				
1,3,5-Trimethylbenzene	106	106	89-129	0	30				
Vinyl Chloride	93	89	62-135	4	30				
Xylene (Total)	110	110	81-137	0	30				

Batch number: 132481848003

Sample number(s): 7186248-7186264 UNSPK: 7186254 BKG: 7186254

Arsenic	105	106	81-123	1	20	N.D.	N.D.	0 (1)	20
Barium	104	104	78-118	0	20	0.0764	0.0762	0	20
Cadmium	104	104	83-116	0	20	N.D.	N.D.	0 (1)	20
Calcium	104	109	81-118	2	20	6.94	6.99	1	20
Chromium	102	101	81-120	1	20	N.D.	N.D.	0 (1)	20
Lead	101	100	75-125	1	20	N.D.	N.D.	0 (1)	20
Magnesium	101	106	75-125	2	20	3.08	3.09	0	20
Nickel	106	106	86-115	0	20	N.D.	N.D.	0 (1)	20
Selenium	100	100	75-125	1	20	N.D.	N.D.	0 (1)	20
Silver	107	106	75-125	0	20	N.D.	N.D.	0 (1)	20
Vanadium	104	103	90-111	1	20	N.D.	N.D.	0 (1)	20

Batch number: 132485713001

Sample number(s): 7186248-7186264 UNSPK: 7186259 BKG: 7186259

Mercury	103	100	80-120	3	20	N.D.	N.D.	0 (1)	20
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Batch number: 13254807902A

Sample number(s): 7186248-7186262,7186264 UNSPK: 7186248

HEM (oil & grease) 65* 78-114

*- Outside of specification

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

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/12/13 at 10:03 AM

Group Number: 1416499

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: G132491AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7186248	102	101	97	94
7186249	102	100	99	95
7186250	102	100	98	95
7186251	103	100	98	96
7186252	104	101	98	95
7186253	102	102	97	95
7186254	103	102	98	95
7186255	103	103	98	95
7186256	103	102	98	95
7186257	103	100	98	95
7186258	102	97	98	96
7186259	102	100	98	94
7186260	103	102	97	94
7186261	102	100	97	94
7186262	102	103	98	95
7186263	103	101	97	95
7186264	102	100	98	95
7186265	103	101	98	96
Blank	103	100	98	95
LCS	102	99	99	96
MS	103	100	99	95
MSD	103	100	100	96
Limits:	77-114	74-113	77-110	78-110

Analysis Name: PAHs in waters by SIM

Batch number: 13249WAA026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7186248	86	66	106
7186249	80	62	99
7186250	90	66	106
7186251	90	66	104
7186252	89	63	100
7186253	88	66	102
7186254	88	61*	104
7186255	88	71	104
7186256	92	58*	108
7186257	88	56*	104
7186258	90	58*	105
7186259	89	51*	105
7186260	93	64	108
7186261	75	80	107
7186262	91	56*	105
7186263	92	84	103
7186264	92	59*	104
Blank	89	87	102
LCS	89	88	105

*- 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: 1416499

Reported: 09/12/13 at 10:03 AM

Surrogate Quality Control

LCSD	88	88	107
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.

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 14739 Group # 1416499 Sample # 7186248-65
Instructions on reverse side correspond with circled numbers.

1 of 2

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

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental Use only

Group # 1416499

Sample # 7186248-65

Instructions on reverse side correspond with circled numbers

2 of 2

[illegible]

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

1416499

Client/Project: Mayflower WatersShipping Container Sealed: YES NODate of Receipt: 9/5/13Custody Seal Present * : YES NOTime of Receipt: 0940* 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	1.8	TB	WI	Y	B	
2		4.2					
3		0.5					
4		1.6					
5		1.5					
6		1.1					

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

Paperwork Discrepancy/Unpacking Problems:

9/4/13 @ 1220 WS-018 (surface) 1 broken O+G jarUnpacker Signature/Emp#: CCShh 3647 Date/Time: 9/5/13 1028

Issued by Dept. 6042 Management

2174.06

Explanation of Symbols and Abbreviations

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

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Data Qualifiers:

C – result confirmed by reanalysis.

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

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is $<$ CRDL, but $\geq$ IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns $>25\%$	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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