

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 10, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 09/02/2013

Group Number: 1415755

SDG: PEL17

PO Number: B0086003.1301

State of Sample Origin: AR

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
WS-014(1.5-2.0)083113 Grab Surface Water	7182914
WS-014(5.5-6.0)083113 Grab Surface Water	7182915
WS-012(1.5-2.0)083113 Grab Surface Water	7182916
WS-012(5.0-5.5)083113 Grab Surface Water	7182917
WS-010(1.5-2.0)083113 Grab Surface Water	7182918
WS-010(3.5-4.0)083113 Grab Surface Water	7182919
WS-006(0.5-1.0)083113 Grab Surface Water	7182920
WS-005(Surface)083113 Grab Surface Water	7182921
WS-002(Surface)083113 Grab Surface Water	7182922
WS-011(1.5-2.0)083113 Grab Surface Water	7182923
WS-011(5.0-5.5)083113 Grab Surface Water	7182924
WS-018(Surface)083113 Grab Surface Water	7182925
WS-003(Surface)083113 Grab Surface Water	7182926
WS-007(0.5-1.0)083113 Grab Surface Water	7182927
WS-001(0.5-1.0)083113 Grab Surface Water	7182928
WS-EB-047-083113 Grab Water	7182929
DUP-WS-80-083113 Grab Surface Water	7182930

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

ELECTRONIC COPY TO	ARCADIS	Attn: Stephen Barrick
ELECTRONIC COPY TO	ARCADIS	Attn: Lyndi Mott
ELECTRONIC COPY TO	ExxonMobil	Attn: Michael J. Firth
ELECTRONIC COPY TO	ARCADIS	Attn: Emily Leamer

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

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1415755

General Comments:

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

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

Project specific QC samples are not included in this data set

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

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

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

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

Batch #: C132471AA (Sample number(s): 7182921-7182927 UNSPK: 7182922)

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: Methyl Tertiary Butyl Ether

SW-846 8270C SIM, GC/MS Semivolatiles

Batch #: 13246WAJ026 (Sample number(s): 7182914-7182930)

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7182914, 7182915, 7182916, 7182917, 7182918, 7182919, 7182920, 7182921, 7182922, 7182923, 7182924, 7182925, 7182926, 7182927, 7182928, 7182930

Sample #s: 7182929

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

Sample #s: 7182914, 7182915, 7182916, 7182917, 7182918, 7182919, 7182920, 7182921, 7182922, 7182923, 7182924, 7182925, 7182926, 7182927, 7182928, 7182930

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 #: 13252807901A (Sample number(s): 7182914-7182928, 7182930 UNSPK: 7182914)

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)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182914**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 08:35 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP141 SDG#: PEL17-01

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)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182914**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 08:35 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP141 SDG#: PEL17-01

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.

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

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

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

Sample Description: **WS-014(1.5-2.0)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182914**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 08:35 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP141 SDG#: PEL17-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0220	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.52	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.93	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132461AA	09/03/2013 12:42	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132461AA	09/03/2013 12:42	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132461848002	09/05/2013 17:13	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAWJ026	09/04/2013 11:30	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 11:52	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132461848002	09/04/2013 07:37	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848002	09/04/2013 07:37	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848002	09/04/2013 07:37	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848002	09/04/2013 07:37	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848002	09/04/2013 07:37	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848002	09/04/2013 07:37	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848002	09/04/2013 07:37	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848002	09/04/2013 22:40	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132461848002	09/04/2013 07:37	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848002	09/04/2013 07:37	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848002	09/04/2013 07:37	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713002	09/04/2013 07:52	Damary Valentin	1

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

Sample Description: WS-014(1.5-2.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182914
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 08:35 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP141 SDG#: PEL17-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848002	09/03/2013 12:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713002	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13252807901A	09/09/2013 04:31	Yolunder Y Bunch	1

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

Sample Description: WS-014(5.5-6.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182915
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 08:45 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP145 SDG#: PEL17-02

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)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182915**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 08:45 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP145 SDG#: PEL17-02

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.

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	28.5	0.033	0.20	1

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

Sample Description: WS-014(5.5-6.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182915
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 08:45 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP145 SDG#: PEL17-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0227	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.56	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.94	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132461AA	09/03/2013 13:05	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132461AA	09/03/2013 13:05	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132461848002	09/05/2013 17:42	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAWJ026	09/04/2013 11:30	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 11:52	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132461848002	09/04/2013 07:41	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848002	09/04/2013 07:41	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848002	09/04/2013 07:41	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848002	09/04/2013 07:41	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848002	09/04/2013 07:41	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848002	09/04/2013 07:41	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848002	09/04/2013 07:41	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848002	09/04/2013 07:41	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848002	09/04/2013 07:41	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848002	09/04/2013 07:41	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848002	09/04/2013 07:41	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713002	09/04/2013 08:00	Damary Valentin	1

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

Sample Description: WS-014(5.5-6.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182915
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 08:45 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP145 SDG#: PEL17-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848002	09/03/2013 12:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713002	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13252807901A	09/09/2013 04:31	Yolunder Y Bunch	1

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

Sample Description: **WS-012(1.5-2.0)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182916**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 09:00 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP121 SDG#: PEL17-03

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)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182916**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 09:00 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP121 SDG#: PEL17-03

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.

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	29.4	0.033	0.20	1

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

Sample Description: WS-012(1.5-2.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182916
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 09:00 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP121 SDG#: PEL17-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0308	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.78	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.03	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132461AA	09/03/2013 13:27	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132461AA	09/03/2013 13:27	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132461848002	09/05/2013 18:12	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAWJ026	09/04/2013 11:30	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 11:52	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132461848002	09/04/2013 07:52	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848002	09/04/2013 07:52	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848002	09/04/2013 07:52	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848002	09/04/2013 07:52	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848002	09/04/2013 07:52	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848002	09/04/2013 07:52	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848002	09/04/2013 07:52	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848002	09/04/2013 07:52	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848002	09/04/2013 07:52	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848002	09/04/2013 07:52	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848002	09/04/2013 07:52	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713002	09/04/2013 08:02	Damary Valentin	1

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

Sample Description: WS-012(1.5-2.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182916
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 09:00 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP121 SDG#: PEL17-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848002	09/03/2013 12:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713002	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13252807901A	09/09/2013 04:31	Yolunder Y Bunch	1

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

Sample Description: **WS-012(5.0-5.5)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182917**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 09:10 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP125 SDG#: PEL17-04

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)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182917**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 09:10 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP125 SDG#: PEL17-04

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

The 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	1

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

Sample Description: WS-012(5.0-5.5)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182917
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 09:10 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP125 SDG#: PEL17-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.214	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	3.04	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	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	C132461AA	09/03/2013 13:49	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132461AA	09/03/2013 13:49	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132461848002	09/05/2013 18:42	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAWJ026	09/04/2013 11:30	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 11:52	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132461848002	09/04/2013 07:56	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848002	09/04/2013 07:56	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848002	09/04/2013 07:56	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848002	09/04/2013 07:56	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848002	09/04/2013 07:56	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848002	09/04/2013 07:56	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848002	09/04/2013 07:56	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848002	09/04/2013 07:56	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848002	09/04/2013 07:56	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848002	09/04/2013 07:56	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848002	09/04/2013 07:56	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713002	09/04/2013 08:04	Damary Valentin	1

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

Sample Description: WS-012(5.0-5.5)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182917
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 09:10 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP125 SDG#: PEL17-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848002	09/03/2013 12:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713002	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13252807901A	09/09/2013 04:31	Yolunder Y Bunch	1

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

Sample Description: **WS-010(1.5-2.0)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182918**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 09:35 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP101 SDG#: PEL17-05

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)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182918**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 09:35 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP101 SDG#: PEL17-05

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	30.5	0.033	0.20	1

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

Sample Description: **WS-010(1.5-2.0)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182918**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 09:35 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP101 SDG#: PEL17-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.217	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.08	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	3.12	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	C132461AA	09/03/2013 19:43	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132461AA	09/03/2013 19:43	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132461848002	09/05/2013 19:11	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAWJ026	09/04/2013 11:30	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 11:52	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132461848002	09/04/2013 08:00	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848002	09/04/2013 08:00	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848002	09/04/2013 08:00	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848002	09/04/2013 08:00	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848002	09/04/2013 08:00	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848002	09/04/2013 08:00	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848002	09/04/2013 08:00	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848002	09/04/2013 08:00	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848002	09/04/2013 08:00	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848002	09/04/2013 08:00	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848002	09/04/2013 08:00	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713002	09/04/2013 08:10	Damary Valentin	1

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

Sample Description: WS-010(1.5-2.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182918
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 09:35 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP101 SDG#: PEL17-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848002	09/03/2013 12:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713002	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13252807901A	09/09/2013 04:31	Yolunder Y Bunch	1

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

Sample Description: WS-010(3.5-4.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182919
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 09:45 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP103 SDG#: PEL17-06

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)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182919**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 09:45 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP103 SDG#: PEL17-06

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	0.054	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.	0.033	0.054	1
08357	Phenanthrene	85-01-8	N.D.	0.033	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.

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	30.8	0.033	0.20	1

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

Sample Description: WS-010(3.5-4.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182919
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 09:45 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP103 SDG#: PEL17-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.312	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.16	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	3.14	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132461AA	09/03/2013 20:05	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132461AA	09/03/2013 20:05	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132461848002	09/05/2013 19:41	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAWJ026	09/04/2013 11:30	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 11:52	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132461848002	09/04/2013 08:04	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848002	09/04/2013 08:04	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848002	09/04/2013 08:04	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848002	09/04/2013 08:04	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848002	09/04/2013 08:04	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848002	09/04/2013 08:04	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848002	09/04/2013 08:04	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848002	09/04/2013 08:04	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848002	09/04/2013 08:04	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848002	09/04/2013 08:04	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848002	09/04/2013 08:04	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713002	09/04/2013 08:12	Damary Valentin	1

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

Sample Description: WS-010(3.5-4.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182919
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 09:45 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP103 SDG#: PEL17-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848002	09/03/2013 12:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713002	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13252807901A	09/09/2013 04:31	Yolunder Y Bunch	1

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

Sample Description: WS-006(0.5-1.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182920
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 09:50 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP060 SDG#: PEL17-07

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)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182920**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 09:50 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP060 SDG#: PEL17-07

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	0.052	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.052	1
08357	Anthracene	120-12-7	N.D.	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.052	1
08357	Chrysene	218-01-9	N.D.	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.052	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.052	1
08357	Fluorene	86-73-7	N.D.	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.052	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.052	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.052	1
08357	Pyrene	129-00-0	N.D.	0.010	0.052	1

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	28.8	0.033	0.20	1

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

Sample Description: **WS-006(0.5-1.0)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182920**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 09:50 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP060 SDG#: PEL17-07

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	0.0405	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.63	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.98	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	C132461AA	09/03/2013 20:27	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132461AA	09/03/2013 20:27	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132461848002	09/05/2013 20:10	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAWJ026	09/04/2013 11:30	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 11:52	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132461848002	09/04/2013 07:14	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848002	09/04/2013 07:14	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848002	09/04/2013 07:14	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848002	09/04/2013 07:14	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848002	09/04/2013 07:14	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848002	09/04/2013 07:14	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848002	09/04/2013 07:14	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848002	09/04/2013 07:14	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848002	09/04/2013 07:14	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848002	09/04/2013 07:14	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848002	09/04/2013 07:14	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713002	09/04/2013 08:14	Damary Valentin	1

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

Sample Description: WS-006(0.5-1.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182920
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 09:50 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP060 SDG#: PEL17-07

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	132461848002	09/03/2013 12:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713002	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13252807901A	09/09/2013 04:31	Yolunder Y Bunch	1

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

Sample Description: **WS-005 (Surface) 083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182921**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 10:15 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP05S SDG#: PEL17-08

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) 083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182921**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 10:15 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP05S SDG#: PEL17-08

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	30.5	0.033	0.20	1

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

Sample Description: **WS-005 (Surface) 083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182921**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 10:15 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP05S SDG#: PEL17-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0373	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	2.99	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	C132471AA	09/04/2013 11:30	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132471AA	09/04/2013 11:30	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAJ026	09/05/2013 20:40	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAJ026	09/04/2013 11:30	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 11:52	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132461848002	09/04/2013 08:07	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848002	09/04/2013 08:07	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848002	09/04/2013 08:07	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848002	09/04/2013 08:07	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848002	09/04/2013 08:07	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848002	09/04/2013 08:07	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848002	09/04/2013 08:07	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848002	09/04/2013 08:07	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848002	09/04/2013 08:07	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848002	09/04/2013 08:07	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848002	09/04/2013 08:07	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713002	09/04/2013 08:16	Damary Valentin	1

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

Sample Description: WS-005(Surface)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182921
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 10:15 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP05S SDG#: PEL17-08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848002	09/03/2013 12:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713002	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13252807901A	09/09/2013 04:31	Yolunder Y Bunch	1

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

Sample Description: **WS-002 (Surface) 083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182922**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 10:40 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP02S SDG#: PEL17-09

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) 083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182922**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 10:40 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP02S SDG#: PEL17-09

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	0.4 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	29.1	0.033	0.20	1

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

Sample Description: WS-002 (Surface) 083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182922
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 10:40 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP02S SDG#: PEL17-09

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	0.0228	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.68	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	3.01	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.	1.9 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	C132471AA	09/04/2013 11:52	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132471AA	09/04/2013 11:52	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAJ026	09/05/2013 21:09	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAJ026	09/04/2013 11:30	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 11:52	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132461848002	09/04/2013 08:11	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848002	09/04/2013 08:11	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848002	09/04/2013 08:11	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848002	09/04/2013 08:11	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848002	09/04/2013 08:11	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848002	09/04/2013 08:11	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848002	09/04/2013 08:11	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848002	09/04/2013 22:44	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132461848002	09/04/2013 08:11	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848002	09/04/2013 08:11	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848002	09/04/2013 08:11	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713002	09/04/2013 08:18	Damary Valentin	1

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

Sample Description: WS-002 (Surface) 083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182922
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 10:40 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP02S SDG#: PEL17-09

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	132461848002	09/03/2013 12:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713002	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13252807901A	09/09/2013 04:31	Yolunder Y Bunch	1

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

Sample Description: WS-011(1.5-2.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182923
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 11:15 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP111 SDG#: PEL17-10

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)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182923**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 11:15 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP111 SDG#: PEL17-10

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	0.054	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.

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	29.6	0.033	0.20	1

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

Sample Description: **WS-011(1.5-2.0)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182923**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 11:15 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP111 SDG#: PEL17-10

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	0.0177	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.72	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	3.11	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132471AA	09/04/2013 12:16	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132471AA	09/04/2013 12:16	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAJ026	09/05/2013 21:39	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAJ026	09/04/2013 11:30	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 11:52	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132461848002	09/04/2013 08:15	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848002	09/04/2013 08:15	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848002	09/04/2013 08:15	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848002	09/04/2013 08:15	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848002	09/04/2013 08:15	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848002	09/04/2013 08:15	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848002	09/04/2013 08:15	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848002	09/04/2013 08:15	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848002	09/04/2013 08:15	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848002	09/04/2013 08:15	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848002	09/04/2013 08:15	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713002	09/04/2013 08:20	Damary Valentin	1

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

Sample Description: WS-011(1.5-2.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182923
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 11:15 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP111 SDG#: PEL17-10

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	132461848002	09/03/2013 12:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713002	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13252807901A	09/09/2013 04:31	Yolunder Y Bunch	1

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

Sample Description: **WS-011(5.0-5.5)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182924**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 11:25 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP115 SDG#: PEL17-11

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

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

Sample Description: **WS-011(5.0-5.5)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182924**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 11:25 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP115 SDG#: PEL17-11

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	29.6	0.033	0.20	1

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

Sample Description: WS-011(5.0-5.5)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182924
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 11:25 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP115 SDG#: PEL17-11

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	0.0369	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	3.07	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.	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	C132471AA	09/04/2013 12:39	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132471AA	09/04/2013 12:39	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAJ026	09/05/2013 22:08	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAJ026	09/04/2013 11:30	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 11:52	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132461848002	09/04/2013 08:19	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848002	09/04/2013 08:19	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848002	09/04/2013 08:19	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848002	09/04/2013 08:19	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848002	09/04/2013 08:19	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848002	09/04/2013 08:19	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848002	09/04/2013 08:19	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848002	09/04/2013 08:19	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848002	09/04/2013 08:19	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848002	09/04/2013 08:19	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848002	09/04/2013 08:19	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713002	09/04/2013 08:22	Damary Valentin	1

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

Sample Description: WS-011(5.0-5.5)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182924
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 11:25 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP115 SDG#: PEL17-11

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	132461848002	09/03/2013 12:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713002	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13252807901A	09/09/2013 04:31	Yolunder Y Bunch	1

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

Sample Description: **WS-018 (Surface) 083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182925**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 11:45 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP18S SDG#: PEL17-12

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

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

Sample Description: **WS-018 (Surface) 083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182925**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 11:45 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP18S SDG#: PEL17-12

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	0.3 J	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.050	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.050	1
08357	Anthracene	120-12-7	N.D.	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.050	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.050	1
08357	Chrysene	218-01-9	N.D.	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.050	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.050	1
08357	Fluorene	86-73-7	N.D.	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.050	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.050	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.050	1
08357	Pyrene	129-00-0	N.D.	0.010	0.050	1

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	31.2	0.033	0.20	1

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

Sample Description: WS-018 (Surface) 083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182925
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 11:45 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP18S SDG#: PEL17-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0075 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.156	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	3.24	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	C132471AA	09/04/2013 13:01	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132471AA	09/04/2013 13:01	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAJ026	09/05/2013 22:37	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAJ026	09/04/2013 11:30	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 11:52	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132461848002	09/04/2013 08:22	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848002	09/04/2013 08:22	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848002	09/04/2013 08:22	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848002	09/04/2013 08:22	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848002	09/04/2013 08:22	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848002	09/04/2013 08:22	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848002	09/04/2013 08:22	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848002	09/04/2013 08:22	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848002	09/04/2013 08:22	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848002	09/04/2013 08:22	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848002	09/04/2013 08:22	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713002	09/04/2013 08:24	Damary Valentin	1

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

Sample Description: WS-018 (Surface) 083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182925
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 11:45 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP18S SDG#: PEL17-12

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848002	09/03/2013 12:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713002	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13252807901A	09/09/2013 04:31	Yolunder Y Bunch	1

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

Sample Description: **WS-003 (Surface) 083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182926**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 11:55 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP03S SDG#: PEL17-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Acetone	67-64-1	3.4 J	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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

Sample Description: **WS-003 (Surface) 083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182926**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 11:55 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP03S SDG#: PEL17-13

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	30.8	0.033	0.20	1

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

Sample Description: WS-003 (Surface) 083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182926
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 11:55 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP03S SDG#: PEL17-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0345	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.54	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.92	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132471AA	09/04/2013 13:23	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132471AA	09/04/2013 13:23	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAJ026	09/05/2013 23:07	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAJ026	09/04/2013 11:30	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 11:52	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132461848002	09/04/2013 08:26	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848002	09/04/2013 08:26	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848002	09/04/2013 08:26	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848002	09/04/2013 08:26	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848002	09/04/2013 08:26	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848002	09/04/2013 08:26	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848002	09/04/2013 08:26	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848002	09/04/2013 08:26	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848002	09/04/2013 08:26	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848002	09/04/2013 08:26	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848002	09/04/2013 08:26	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713002	09/04/2013 08:26	Damary Valentin	1

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

Sample Description: WS-003 (Surface) 083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182926
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 11:55 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP03S SDG#: PEL17-13

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848002	09/03/2013 12:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713002	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13252807901A	09/09/2013 04:31	Yolunder Y Bunch	1

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

Sample Description: **WS-007(0.5-1.0)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182927**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 12:15 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP070 SDG#: PEL17-14

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	8.2	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)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182927**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 12:15 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP070 SDG#: PEL17-14

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	0.4 J	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.052	1
08357	Acenaphthylene	208-96-8	0.024 J	0.010	0.052	1
08357	Anthracene	120-12-7	0.035 J	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	0.052	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	0.056	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	0.16	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	0.059	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	0.10	0.010	0.052	1
08357	Chrysene	218-01-9	0.13	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	0.015 J	0.010	0.052	1
08357	Fluoranthene	206-44-0	0.20	0.010	0.052	1
08357	Fluorene	86-73-7	0.013 J	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.068	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.052	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.052	1
08357	Phenanthrene	85-01-8	0.061	0.031	0.052	1
08357	Pyrene	129-00-0	0.17	0.010	0.052	1

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	123	0.033	0.20 1

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

Sample Description: WS-007(0.5-1.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182927
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 12:15 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP070 SDG#: PEL17-14

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	
07035	Arsenic	7440-38-2	0.0488	0.0068	0.0200	1
07046	Barium	7440-39-3	1.06	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0052	0.00076	0.0050	1
01750	Calcium	7440-70-2	18.3	0.0334	0.200	1
07051	Chromium	7440-47-3	0.135	0.0016	0.0150	1
07055	Lead	7439-92-1	0.440	0.0047	0.0150	1
01757	Magnesium	7439-95-4	18.7	0.0167	0.100	1
07061	Nickel	7440-02-0	0.146	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0030 J	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.192	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.00044	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	C132471AA	09/04/2013 13:45	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132471AA	09/04/2013 13:45	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAJ026	09/05/2013 23:36	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAJ026	09/04/2013 11:30	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 11:52	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132461848002	09/04/2013 08:38	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848002	09/04/2013 08:38	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848002	09/04/2013 08:38	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848002	09/04/2013 08:38	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848002	09/04/2013 08:38	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848002	09/04/2013 22:48	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	132461848002	09/04/2013 08:38	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848002	09/04/2013 22:48	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	132461848002	09/04/2013 08:38	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848002	09/04/2013 08:38	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848002	09/04/2013 08:38	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713002	09/04/2013 08:28	Damary Valentin	1

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

Sample Description: WS-007(0.5-1.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182927
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 12:15 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP070 SDG#: PEL17-14

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	132461848002	09/03/2013 12:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713002	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13252807901A	09/09/2013 04:31	Yolunder Y Bunch	1

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

Sample Description: **WS-001(0.5-1.0)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182928**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 12:25 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP010 SDG#: PEL17-15

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)083113 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182928**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 12:25 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP010 SDG#: PEL17-15

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 CaCO3	471-34-1	29.2	0.033	0.20	1

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

Sample Description: WS-001(0.5-1.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182928
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 12:25 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP010 SDG#: PEL17-15

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	0.105	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.72	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	3.00	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	I132461AA	09/03/2013 15:35	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132461AA	09/03/2013 15:35	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132461848002	09/06/2013 00:05	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAWJ026	09/04/2013 11:30	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 11:52	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132461848002	09/04/2013 08:42	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848002	09/04/2013 08:42	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848002	09/04/2013 08:42	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848002	09/04/2013 08:42	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848002	09/04/2013 08:42	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848002	09/04/2013 08:42	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848002	09/04/2013 08:42	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848002	09/04/2013 08:42	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848002	09/04/2013 08:42	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848002	09/04/2013 08:42	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848002	09/04/2013 08:42	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713002	09/04/2013 08:34	Damary Valentin	1

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

Sample Description: WS-001(0.5-1.0)083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182928
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 12:25 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MP010 SDG#: PEL17-15

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	132461848002	09/03/2013 12:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713002	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13252807901A	09/09/2013 04:31	Yolunder Y Bunch	1

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

Sample Description: **WS-EB-047-083113 Grab Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182929**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 13:00 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MPE47 SDG#: PEL17-16EB

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	12	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	2.3 J	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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

Sample Description: **WS-EB-047-083113 Grab Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182929**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 13:00 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MPE47 SDG#: PEL17-16EB

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	0.5	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	0.1 J	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	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	0.28	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	0.00043 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-047-083113 Grab Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7182929**
 LL Group # **1415755**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 08/31/2013 13:00 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MPE47 SDG#: PEL17-16EB

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	0.112 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	N.D.	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132461AA	09/03/2013 13:28	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132461AA	09/03/2013 13:28	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132461848002	09/06/2013 00:35	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	132461848002	09/04/2013 11:30	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 11:52	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132461848002	09/04/2013 08:45	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848002	09/04/2013 08:45	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848002	09/04/2013 08:45	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848002	09/04/2013 08:45	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848002	09/04/2013 08:45	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848002	09/04/2013 08:45	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848002	09/04/2013 08:45	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848002	09/04/2013 08:45	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848002	09/04/2013 08:45	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848002	09/04/2013 08:45	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848002	09/04/2013 08:45	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713002	09/04/2013 08:37	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848002	09/03/2013 12:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713002	09/03/2013 15:00	Nelli S Markaryan	1

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

Sample Description: DUP-WS-80-083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182930
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MPD80 SDG#: PEL17-17FD*

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-80-083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182930
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MPD80 SDG#: PEL17-17FD*

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	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.	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	29.0	0.033	0.20	1

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

Sample Description: DUP-WS-80-083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182930
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MPD80 SDG#: PEL17-17FD*

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	0.0514	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.66	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.99	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.	2.7 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	I132461AA	09/03/2013 15:56	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132461AA	09/03/2013 15:56	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132461848002	09/06/2013 01:04	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAWJ026	09/04/2013 11:30	Katheryne V Sponheimer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256001	09/04/2013 11:52	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132461848002	09/04/2013 08:49	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848002	09/04/2013 08:49	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848002	09/04/2013 08:49	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848002	09/04/2013 08:49	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848002	09/04/2013 08:49	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848002	09/04/2013 08:49	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848002	09/04/2013 08:49	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848002	09/04/2013 08:49	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848002	09/04/2013 08:49	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848002	09/04/2013 08:49	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848002	09/04/2013 08:49	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713002	09/04/2013 08:39	Damary Valentin	1

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

Sample Description: DUP-WS-80-083113 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182930
LL Group # 1415755
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/31/2013 by HVA

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

Submitted: 09/02/2013 10:05

Reported: 09/10/2013 13:24

MPD80 SDG#: PEL17-17FD*

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	132461848002	09/03/2013 12:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713002	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13252807901A	09/09/2013 04:31	Yolunder Y Bunch	1

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/10/13 at 01:24 PM

Group Number: 1415755

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: C132461AA	Sample number(s): 7182914-7182920								
Acetone	N.D.	3.0	5.0	ug/l	112		60-139		
Allyl Chloride	N.D.	0.1	0.5	ug/l	80		61-130		
Benzene	N.D.	0.1	0.5	ug/l	102		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	103		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	113		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	109		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	125		73-128		
Bromomethane	N.D.	0.1	0.5	ug/l	97		62-126		
2-Butanone	N.D.	1.0	5.0	ug/l	111		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	98		80-120		
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	99		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	100		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	121		80-129		
Chlorobenzene	N.D.	0.1	0.5	ug/l	108		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	91		68-120		
Chloroform	N.D.	0.1	0.5	ug/l	111		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	81		55-120		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	99		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	102		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	121		64-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	114		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	107		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	111		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	86		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	98		80-120		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	115		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	103		80-123		
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	104		80-120		
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	109		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	101		75-145		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	102		80-120		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	100		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	99		75-122		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	107		80-121		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	99		80-123		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	97		80-120		
Ethyl ether	N.D.	0.1	0.5	ug/l	94		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	102		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	107		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	100		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
Reported: 09/10/13 at 01:24 PM

Group Number: 1415755

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCS %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Isopropylbenzene	N.D.	0.1	0.5	ug/l	103		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	98		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	93		80-120		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	89		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	106		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	98		80-120		
Styrene	N.D.	0.1	0.5	ug/l	105		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	111		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	94		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	111		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	118		65-131		
Toluene	N.D.	0.1	0.5	ug/l	103		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	85		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	88		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	112		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	106		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	111		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	111		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	106		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	100		80-120		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	99		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	89		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	104		80-120		

Batch number: C132471AA

Sample number(s): 7182921-7182927

Acetone	N.D.	3.0	5.0	ug/l	116		60-139		
Allyl Chloride	N.D.	0.1	0.5	ug/l	77		61-130		
Benzene	N.D.	0.1	0.5	ug/l	101		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	103		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	115		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	108		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	118		73-128		
Bromomethane	N.D.	0.1	0.5	ug/l	100		62-126		
2-Butanone	N.D.	1.0	5.0	ug/l	113		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	97		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	95		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	119		80-129		
Chlorobenzene	N.D.	0.1	0.5	ug/l	107		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	95		68-120		
Chloroform	N.D.	0.1	0.5	ug/l	110		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	84		55-120		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	99		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	101		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	115		64-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	111		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	105		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	111		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	106		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	94		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	114		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	102		80-120		

*- 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
Reported: 09/10/13 at 01:24 PM

Group Number: 1415755

<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>
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	106		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	105		75-145		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	100		80-120		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	99		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	99		75-122		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	104		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	94		80-120		
Ethyl ether	N.D.	0.1	0.5	ug/l	87		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	101		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	105		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	99		73-120		
Isopropylbenzene	N.D.	0.1	0.5	ug/l	101		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	96		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	89		80-120		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	86		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	104		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	97		80-120		
Styrene	N.D.	0.1	0.5	ug/l	106		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	111		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	93		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	110		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	117		65-131		
Toluene	N.D.	0.1	0.5	ug/l	102		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	83		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	85		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	110		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	106		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	109		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	114		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	107		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	99		80-120		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	98		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	92		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	103		80-120		

Batch number: I132461AA

Sample number(s): 7182928-7182930

Acetone	N.D.	3.0	5.0	ug/l	111		60-139		
Allyl Chloride	N.D.	0.1	0.5	ug/l	100		61-130		
Benzene	N.D.	0.1	0.5	ug/l	102		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	101		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	104		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	103		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	108		73-128		
Bromomethane	N.D.	0.1	0.5	ug/l	103		62-126		
2-Butanone	N.D.	1.0	5.0	ug/l	99		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	103		80-120		
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	104		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	103		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	105		80-129		
Chlorobenzene	N.D.	0.1	0.5	ug/l	104		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	105		68-120		
Chloroform	N.D.	0.1	0.5	ug/l	104		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	101		55-120		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	102		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	102		80-120		

*- 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
Reported: 09/10/13 at 01:24 PM

Group Number: 1415755

<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>
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	105		64-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	105		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	107		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	100		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	106		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	93		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	102		80-120		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	104		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	101		80-123		
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	102		80-120		
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	104		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	105		75-145		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	106		80-120		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	102		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	101		75-122		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	105		80-121		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	105		80-123		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	104		80-120		
Ethyl ether	N.D.	0.1	0.5	ug/l	89		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	102		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	98		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	100		73-120		
Isopropylbenzene	N.D.	0.1	0.5	ug/l	104		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	102		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	101		80-120		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	105		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	103		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	104		80-120		
Styrene	N.D.	0.1	0.5	ug/l	106		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	105		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	106		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	103		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	95		65-131		
Toluene	N.D.	0.1	0.5	ug/l	102		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	103		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	104		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	106		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	105		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	105		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	106		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	105		80-120		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	105		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	105		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	103		80-120		

Batch number: 13246WAJ026

Sample number(s): 7182914-7182930

Acenaphthene	N.D.	0.010	0.050	ug/l	100	104	77-118	4	30
Acenaphthylene	N.D.	0.010	0.050	ug/l	108	112	80-123	4	30
Anthracene	N.D.	0.010	0.050	ug/l	103	110	78-123	6	30
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	91	91	73-127	0	30
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	94	98	72-120	4	30
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	106	109	79-136	2	30
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	109	116	64-130	7	30

*- Outside of specification

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/10/13 at 01:24 PM

Group Number: 1415755

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCS %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	111	115	73-131	4	30
Chrysene	N.D.	0.010	0.050	ug/l	104	108	76-125	4	30
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	105	111	58-131	6	30
Fluoranthene	N.D.	0.010	0.050	ug/l	108	110	79-124	2	30
Fluorene	N.D.	0.010	0.050	ug/l	99	102	74-115	3	30
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	110	114	62-130	4	30
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	108	114	80-126	6	30
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	107	111	81-124	4	30
Naphthalene	N.D.	0.030	0.050	ug/l	104	108	75-120	4	30
Phenanthrene	N.D.	0.030	0.050	ug/l	107	109	75-120	2	30
Pyrene	N.D.	0.010	0.050	ug/l	101	104	71-130	3	30

Batch number: 132461848002

Sample number(s): 7182914-7182930

Arsenic	N.D.	0.0068	0.0200	mg/l	107		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	107		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	109		90-112		
Calcium	0.0713 J	0.0334	0.200	mg/l	106		90-110		
Chromium	N.D.	0.0016	0.0150	mg/l	105		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	106		88-110		
Magnesium	N.D.	0.0167	0.100	mg/l	103		90-110		
Nickel	N.D.	0.0015	0.0100	mg/l	108		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	110		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	104		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	103		90-110		

Batch number: 132465713002

Sample number(s): 7182914-7182930

Mercury	N.D.	0.00006	0.00020	mg/l	104		80-120		
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Batch number: 13252807901A

Sample number(s): 7182914-7182928,7182930

HEM (oil & grease)	N.D.	1.4	5.0	mg/l	92	93	78-114	1	16
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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: C132461AA	Sample number(s): 7182914-7182920 UNSPK: 7182915								
Acetone	116	119	57-163	3	30				
Allyl Chloride	75	82	56-160	9	30				
Benzene	98	104	87-126	6	30				
Bromobenzene	99	105	80-123	6	30				
Bromochloromethane	111	112	82-125	1	30				
Bromodichloromethane	103	108	82-133	5	30				
Bromoform	115	120	60-138	5	30				
Bromomethane	94	103	66-130	9	30				
2-Butanone	105	108	56-160	3	30				
n-Butylbenzene	96	103	83-131	6	30				
sec-Butylbenzene	96	104	84-128	7	30				
tert-Butylbenzene	96	106	84-135	9	30				
Carbon Tetrachloride	121	127	81-148	5	30				

*- Outside of specification

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

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/10/13 at 01:24 PM

Group Number: 1415755

Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Chlorobenzene	104	111	78-133	6	30				
Chloroethane	89	99	70-139	11	30				
Chloroform	106	112	86-136	5	30				
Chloromethane	79	89	49-135	11	30				
2-Chlorotoluene	97	103	75-134	6	30				
4-Chlorotoluene	99	105	76-134	6	30				
1,2-Dibromo-3-chloropropane	117	112	43-143	4	30				
Dibromochloromethane	107	112	79-125	4	30				
1,2-Dibromoethane	99	104	84-127	4	30				
Dibromomethane	103	108	83-126	5	30				
1,2-Dichlorobenzene	100	106	83-117	6	30				
1,3-Dichlorobenzene	102	107	79-132	5	30				
1,4-Dichlorobenzene	101	108	79-120	7	30				
Dichlorodifluoromethane	87	91	28-136	5	30				
1,1-Dichloroethane	93	100	88-136	7	30				
1,2-Dichloroethane	107	111	82-135	4	30				
1,1-Dichloroethene	101	107	83-150	6	30				
cis-1,2-Dichloroethene	99	105	82-129	6	30				
trans-1,2-Dichloroethene	105	111	88-127	6	30				
Dichlorofluoromethane	100	108	81-161	8	30				
1,2-Dichloropropane	95	102	91-126	7	30				
1,3-Dichloropropane	93	98	80-127	5	30				
2,2-Dichloropropane	96	104	80-134	8	30				
1,1-Dichloropropene	104	111	86-139	6	30				
cis-1,3-Dichloropropene	89	96	74-132	8	30				
trans-1,3-Dichloropropene	89	96	71-128	7	30				
Ethyl ether	86	89	57-139	4	30				
Ethylbenzene	99	106	80-140	6	30				
Freon 113	108	110	77-147	1	30				
Hexachlorobutadiene	96	106	65-128	9	30				
Isopropylbenzene	100	107	81-133	6	30				
p-Isopropyltoluene	96	104	84-124	8	30				
Methyl Tertiary Butyl Ether	83	91	82-132	10	30				
4-Methyl-2-Pentanone	80	87	69-149	8	30				
Methylene Chloride	99	105	77-135	6	30				
n-Propylbenzene	96	103	79-131	7	30				
Styrene	101	107	63-151	6	30				
1,1,1,2-Tetrachloroethane	106	113	87-126	6	30				
1,1,2,2-Tetrachloroethane	89	95	75-131	6	30				
Tetrachloroethene	109	116	75-129	6	30				
Tetrahydrofuran	110	114	56-154	3	30				
Toluene	99	107	83-127	7	30				
1,2,3-Trichlorobenzene	80	89	73-125	10	30				
1,2,4-Trichlorobenzene	83	93	77-120	11	30				
1,1,1-Trichloroethane	110	115	85-140	5	30				
1,1,2-Trichloroethane	100	105	85-129	5	30				
Trichloroethene	107	112	85-131	4	30				
Trichlorofluoromethane	114	120	73-139	5	30				
1,2,3-Trichloropropane	100	105	76-120	5	30				
1,2,4-Trimethylbenzene	97	103	87-126	6	30				
1,3,5-Trimethylbenzene	97	103	89-129	7	30				
Vinyl Chloride	89	98	62-135	10	30				

*- Outside of specification

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/10/13 at 01:24 PM

Group Number: 1415755

Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>BKG</u> <u>MAX</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Xylene (Total)	101	107	81-137	6	30			
Batch number: C132471AA	Sample number(s): 7182921-7182927 UNSPK: 7182922							
Acetone	123	130	57-163	6	30			
Allyl Chloride	73	81	56-160	10	30			
Benzene	95	105	87-126	9	30			
Bromobenzene	95	110	80-123	14	30			
Bromochloromethane	110	114	82-125	4	30			
Bromodichloromethane	101	114	82-133	12	30			
Bromoform	112	130	60-138	15	30			
Bromomethane	101	107	66-130	5	30			
2-Butanone	108	117	56-160	8	30			
n-Butylbenzene	94	105	83-131	11	30			
sec-Butylbenzene	93	106	84-128	13	30			
tert-Butylbenzene	91	102	84-135	11	30			
Carbon Tetrachloride	120	127	81-148	6	30			
Chlorobenzene	103	116	78-133	12	30			
Chloroethane	96	104	70-139	7	30			
Chloroform	105	115	86-136	9	30			
Chloromethane	86	94	49-135	9	30			
2-Chlorotoluene	93	106	75-134	12	30			
4-Chlorotoluene	96	107	76-134	11	30			
1,2-Dibromo-3-chloropropane	115	127	43-143	10	30			
Dibromochloromethane	106	121	79-125	13	30			
1,2-Dibromoethane	97	112	84-127	14	30			
Dibromomethane	103	114	83-126	10	30			
1,2-Dichlorobenzene	99	113	83-117	13	30			
1,3-Dichlorobenzene	99	111	79-132	12	30			
1,4-Dichlorobenzene	100	112	79-120	12	30			
Dichlorodifluoromethane	101	104	28-136	3	30			
1,1-Dichloroethane	92	100	88-136	9	30			
1,2-Dichloroethane	106	117	82-135	10	30			
1,1-Dichloroethene	97	105	83-150	7	30			
cis-1,2-Dichloroethene	96	107	82-129	11	30			
trans-1,2-Dichloroethene	102	111	88-127	8	30			
Dichlorofluoromethane	108	113	81-161	5	30			
1,2-Dichloropropane	93	105	91-126	12	30			
1,3-Dichloropropane	91	105	80-127	14	30			
2,2-Dichloropropane	96	105	80-134	9	30			
1,1-Dichloropropene	102	112	86-139	10	30			
cis-1,3-Dichloropropene	85	100	74-132	17	30			
trans-1,3-Dichloropropene	86	101	71-128	16	30			
Ethyl ether	82	87	57-139	7	30			
Ethylbenzene	97	110	80-140	12	30			
Freon 113	107	111	77-147	3	30			
Hexachlorobutadiene	97	108	65-128	10	30			
Isopropylbenzene	99	111	81-133	12	30			
p-Isopropyltoluene	93	105	84-124	12	30			
Methyl Tertiary Butyl Ether	81*	93	82-132	14	30			
4-Methyl-2-Pentanone	78	95	69-149	19	30			
Methylene Chloride	98	105	77-135	7	30			
n-Propylbenzene	92	105	79-131	13	30			

*- Outside of specification

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/10/13 at 01:24 PM

Group Number: 1415755

Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Styrene	99	113	63-151	13	30				
1,1,1,2-Tetrachloroethane	104	118	87-126	13	30				
1,1,2,2-Tetrachloroethane	88	101	75-131	13	30				
Tetrachloroethene	106	117	75-129	9	30				
Tetrahydrofuran	111	122	56-154	9	30				
Toluene	96	108	83-127	11	30				
1,2,3-Trichlorobenzene	78	91	73-125	15	30				
1,2,4-Trichlorobenzene	82	94	77-120	14	30				
1,1,1-Trichloroethane	108	117	85-140	8	30				
1,1,2-Trichloroethane	98	112	85-129	13	30				
Trichloroethene	104	117	85-131	11	30				
Trichlorofluoromethane	122	124	73-139	2	30				
1,2,3-Trichloropropane	100	113	76-120	12	30				
1,2,4-Trimethylbenzene	95	107	87-126	12	30				
1,3,5-Trimethylbenzene	94	106	89-129	12	30				
Vinyl Chloride	95	104	62-135	8	30				
Xylene (Total)	99	112	81-137	12	30				

Batch number: I132461AA	Sample number(s): 7182928-7182930 UNSPK: P182956								
Acetone	111	111	57-163	0	30				
Allyl Chloride	107	105	56-160	2	30				
Benzene	106	106	87-126	0	30				
Bromobenzene	101	101	80-123	0	30				
Bromochloromethane	106	105	82-125	2	30				
Bromodichloromethane	104	104	82-133	0	30				
Bromoform	106	107	60-138	1	30				
Bromomethane	106	106	66-130	1	30				
2-Butanone	97	95	56-160	2	30				
n-Butylbenzene	108	107	83-131	0	30				
sec-Butylbenzene	109	109	84-128	0	30				
tert-Butylbenzene	108	107	84-135	1	30				
Carbon Tetrachloride	113	114	81-148	0	30				
Chlorobenzene	106	107	78-133	0	30				
Chloroethane	108	107	70-139	1	30				
Chloroform	108	108	86-136	0	30				
Chloromethane	106	104	49-135	2	30				
2-Chlorotoluene	105	105	75-134	0	30				
4-Chlorotoluene	105	104	76-134	1	30				
1,2-Dibromo-3-chloropropane	100	101	43-143	1	30				
Dibromochloromethane	105	106	79-125	1	30				
1,2-Dibromoethane	104	105	84-127	1	30				
Dibromomethane	99	100	83-126	1	30				
1,2-Dichlorobenzene	106	106	83-117	0	30				
1,3-Dichlorobenzene	106	107	79-132	0	30				
1,4-Dichlorobenzene	106	106	79-120	1	30				
Dichlorodifluoromethane	104	102	28-136	2	30				
1,1-Dichloroethane	106	107	88-136	1	30				
1,2-Dichloroethane	105	105	82-135	0	30				
1,1-Dichloroethene	109	110	83-150	1	30				
cis-1,2-Dichloroethene	105	106	82-129	1	30				
trans-1,2-Dichloroethene	110	111	88-127	1	30				
Dichlorofluoromethane	110	109	81-161	1	30				

*- Outside of specification

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/10/13 at 01:24 PM

Group Number: 1415755

Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
1,2-Dichloropropane	109	109	91-126	0	30				
1,3-Dichloropropane	101	101	80-127	0	30				
2,2-Dichloropropane	108	108	80-134	0	30				
1,1-Dichloropropene	114	113	86-139	0	30				
cis-1,3-Dichloropropene	107	107	74-132	0	30				
trans-1,3-Dichloropropene	104	104	71-128	1	30				
Ethyl ether	89	89	57-139	0	30				
Ethylbenzene	107	107	80-140	0	30				
Freon 113	107	107	77-147	0	30				
Hexachlorobutadiene	105	107	65-128	2	30				
Isopropylbenzene	110	110	81-133	0	30				
p-Isopropyltoluene	106	106	84-124	0	30				
Methyl Tertiary Butyl Ether	101	101	82-132	0	30				
4-Methyl-2-Pentanone	100	100	69-149	1	30				
Methylene Chloride	104	105	77-135	1	30				
n-Propylbenzene	108	107	79-131	0	30				
Styrene	108	108	63-151	0	30				
1,1,1,2-Tetrachloroethane	107	108	87-126	1	30				
1,1,2,2-Tetrachloroethane	103	102	75-131	1	30				
Tetrachloroethene	109	109	75-129	0	30				
Tetrahydrofuran	93	91	56-154	1	30				
Toluene	107	108	83-127	0	30				
1,2,3-Trichlorobenzene	100	102	73-125	2	30				
1,2,4-Trichlorobenzene	102	103	77-120	1	30				
1,1,1-Trichloroethane	110	110	85-140	0	30				
1,1,2-Trichloroethane	104	104	85-129	1	30				
Trichloroethene	111	111	85-131	0	30				
Trichlorofluoromethane	112	115	73-139	2	30				
1,2,3-Trichloropropane	101	103	76-120	2	30				
1,2,4-Trimethylbenzene	107	106	87-126	0	30				
1,3,5-Trimethylbenzene	108	107	89-129	0	30				
Vinyl Chloride	112	111	62-135	1	30				
Xylene (Total)	107	108	81-137	0	30				

Batch number:	Sample number(s):	UNSPK:	BKG:					
132461848002	7182914-7182930	7182920	7182920					
Arsenic	109	109	81-123	0	20	N.D.	N.D.	0 (1) 20
Barium	106	107	78-118	1	20	0.0405	0.0406	0 20
Cadmium	107	108	83-116	1	20	N.D.	N.D.	0 (1) 20
Calcium	105	104	81-118	0	20	6.63	6.70	1 20
Chromium	104	104	81-120	0	20	N.D.	N.D.	0 (1) 20
Lead	104	107	75-125	2	20	N.D.	N.D.	0 (1) 20
Magnesium	101	101	75-125	0	20	2.98	2.98	0 20
Nickel	107	107	86-115	0	20	N.D.	N.D.	0 (1) 20
Selenium	107	109	75-125	2	20	N.D.	N.D.	0 (1) 20
Silver	107	105	75-125	2	20	N.D.	N.D.	0 (1) 20
Vanadium	102	103	90-111	0	20	N.D.	N.D.	0 (1) 20

Batch number:	Sample number(s):	UNSPK:	BKG:					
132465713002	7182914-7182930	7182914	7182914					
Mercury	105	103	80-120	2	20	N.D.	N.D.	0 (1) 20

Batch number:	Sample number(s):	UNSPK:	BKG:					
13252807901A	7182914-7182928,7182930	7182914						
HEM (oil & grease)	65*		78-114					

*- Outside of specification

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/10/13 at 01:24 PM

Group Number: 1415755

Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
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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: C132461AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7182914	108	102	96	95
7182915	109	102	96	94
7182916	108	104	96	95
7182917	108	103	96	94
7182918	107	102	96	94
7182919	108	102	96	95
7182920	108	104	97	95
Blank	108	103	96	95
LCS	106	104	98	101
MS	106	102	99	100
MSD	106	102	98	100
Limits:	77-114	74-113	77-110	78-110

Analysis Name: BTEX 25-ml purge
Batch number: C132471AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7182921	108	106	96	95
7182922	109	105	96	96
7182923	108	107	95	95
7182924	109	105	95	94
7182925	110	106	97	95
7182926	110	106	96	95
7182927	110	106	95	95
Blank	109	105	96	94
LCS	107	103	97	100
MS	107	103	98	100
MSD	106	103	98	101
Limits:	77-114	74-113	77-110	78-110

Analysis Name: BTEX 25-ml purge
Batch number: I132461AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7182928	100	104	99	100
7182929	99	102	100	100
7182930	99	102	99	100

*- 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: 09/10/13 at 01:24 PM

Group Number: 1415755

Surrogate Quality Control

Blank	100	102	99	100
LCS	100	98	99	100
MS	100	101	99	101
MSD	100	101	100	101

Limits: 77-114 74-113 77-110 78-110

Analysis Name: PAHs in waters by SIM
Batch number: 13246WAJ026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7182914	90	54*	108
7182915	93	60*	110
7182916	88	59*	105
7182917	90	49*	107
7182918	89	40*	105
7182919	89	40*	105
7182920	86	47*	106
7182921	90	59*	107
7182922	89	47*	106
7182923	90	57*	107
7182924	87	53*	106
7182925	88	60*	102
7182926	93	54*	107
7182927	73	58*	92
7182928	88	53*	102
7182929	92	100	105
7182930	87	55*	102
Blank	98	98	110
LCS	91	92	105
LCSD	92	95	109

Limits: 44-137 62-141 51-136

*- Outside of specification

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

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

ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only

Group # 1415755 Sample # 7182914-30

Instructions on reverse side correspond with circled numbers.

1 of 3

1 Client Information				4 Matrix				5 Analyses Requested												6 Remarks																												
Facility #/SID <u>Mayflower Pipeline Incident</u>				Sediment <input type="checkbox"/>	Potable <input type="checkbox"/>	Ground <input type="checkbox"/>	Surface <input checked="" type="checkbox"/>	Preservation Code												Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other																												
Site Address <u>Mayflower AR</u>								<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">H</td> <td style="width: 20%;">N</td> <td style="width: 20%;">H</td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>														H	N	H																								
H	N	H																																														
ExxonMobil PM <u>Scott Bushroe</u>				Cost Center/AFE				Total # of Containers <u>VOCs 8260 B</u> <u>PAH 8270 SIM</u> <u>RCRA Metals + Ni, V, Cr, Mg</u> <u>0.35 Metals</u> <u>H/E M Oil & Grease</u>												Remarks <u>Lab to filter and preserve Diss. Metals upon receipt</u>																												
Consultant/Office <u>Arcadis</u>				Consultant Phone # <u>919 302 6799</u>																																												
Sampler <u>Hans Van Aller / Dave Drost</u>				Soil <input type="checkbox"/>				Water <input type="checkbox"/>				Oil <input type="checkbox"/>				(3) Grab <input type="checkbox"/> Composite <input type="checkbox"/>																																
2 Sample Identification		Collected		(4) Matrix				(5) Analyses Requested				(6) Remarks																																				
Sample ID	Date	Time	Grab											Composite																																		
<u>WS-014(1.5-2.0)083113</u>	<u>8/31/13</u>	<u>835</u>	<input checked="" type="checkbox"/>											<input type="checkbox"/>																																		
<u>WS-014(5.5-6.0)083113</u>		<u>845</u>	<input checked="" type="checkbox"/>											<input type="checkbox"/>																																		
<u>WS-012(1.5-2.0)083113</u>		<u>900</u>	<input checked="" type="checkbox"/>											<input type="checkbox"/>																																		
<u>WS-012(5.0-5.5)083113</u>		<u>910</u>	<input checked="" type="checkbox"/>											<input type="checkbox"/>																																		
<u>WS-010(1.5-2.0)083113</u>		<u>935</u>	<input checked="" type="checkbox"/>											<input type="checkbox"/>																																		
<u>WS-010(3.5-4.0)083113</u>		<u>945</u>	<input checked="" type="checkbox"/>											<input type="checkbox"/>																																		
<u>WS-066(0.5-1.0)083113</u>		<u>950</u>	<input checked="" type="checkbox"/>											<input type="checkbox"/>																																		
<u>WS-005(surface)083113</u>		<u>1015</u>	<input checked="" type="checkbox"/>											<input type="checkbox"/>																																		
<u>WS-002(surface)083113</u>		<u>1040</u>	<input checked="" type="checkbox"/>											<input type="checkbox"/>																																		
<u>WS-011(1.5-2.0)083113</u>		<u>1115</u>	<input checked="" type="checkbox"/>											<input type="checkbox"/>																																		
<u>WS-011(5.0-5.5)083113</u>		<u>1125</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																																												
<u>WS-018(surface)083113</u>		<u>1145</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																																												

7 Turnaround Time Requested (TAT) (please circle)			Relinquished by		Date	Time	Received by		Date	Time
Standard	<u>5 day</u>	4 day	Relinquished by <u>Hans Van Aller</u>		Date <u>9/1/13</u>	Time <u>1530</u>	Received by <u>[Signature]</u>		Date 	Time
72 hour	48 hour	24 hour								
8 Data Package (circle if required)										

8 Data Package (circle if required)		EDD (circle if required)		Relinquished by Commercial Carrier		Date	Time	Received by		Date	Time
Type I - Full	Type VI (Raw Data)	NJ Reduced	Other	Locus EIM (default)		UPS _____ FedEx _____ Other <u>Southwest</u>		Received by <u>[Signature]</u>		Date <u>9/2/13</u>	Time <u>1005</u>
Temperature Upon Receipt <u>0.6-5.8 °C</u>						Custody Seals Intact? <u>Yes</u> No					

Environmental Sample Administration
Receipt Documentation Log

Client/Project: XOM Mayflower

Shipping Container Sealed: YES NO

Date of Receipt: 9/2/13

Custody Seal Present * : YES NO

Time of Receipt: 1005

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

Source Code: 01

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT121	1.4	2.3	WI	Y	B	
2	↓	5.8	↓	↓	↓	↓	
3	↓	2.4	↓	↓	↓	↓	
4	↓	3.0	↓	↓	↓	↓	
5	↓	1.2	↓	↓	↓	↓	
6	↓	4.0	↓	↓	↓	↓	

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: D. Neslund / 208 Date/Time: 9/2/13 1530

Environmental Sample Administration
Receipt Documentation Log

Client/Project: XOM Mayflower

Shipping Container Sealed: YES NO

Date of Receipt: 9/2/13

Custody Seal Present * : YES NO

Time of Receipt: 1005

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

Source Code: 01

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
7 _x	DT121	2.3	TB	WI	Y	B	
8 _x	↓	2.3	↓	↓	↓	↓	
9 _x	↓	2.3	↓	↓	↓	↓	
10 _x	↓	0.6	↓	↓	↓	↓	
11 _x	↓	2.1	↓	↓	↓	↓	
12 _x	↓	3.9	↓	↓	↓	↓	

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: Daneslund / 208 Date/Time: 9/2/13 1530

Environmental Sample Administration
Receipt Documentation Log

Client/Project: XOM Mayflower
 Date of Receipt: 9/2/13
 Time of Receipt: 1005
 Source Code: 01

Shipping Container Sealed: YES NO
 Custody Seal Present * : YES NO
 * Custody seal was intact unless otherwise noted in the discrepancy section
 Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
13	DT121	4.2	TB	WI	Y	B	
2							
3							
4							
5							
6							

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: Daneslund / 208 Date/Time: 9/2/13 1530

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 limit of quantitation, 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

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns $>25\%$
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is $<$ CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike sample not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- *** Duplicate analysis not within control limits
- +** 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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