

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: 08/31/2013

Group Number: 1415627

SDG: PEL15

PO Number: B0086003.1301

State of Sample Origin: AR

Client Sample DescriptionLancaster Labs (LL) #

WS-014(1.5-2.0)083013 Grab Surface Water	7182131
WS-014(5.5-6.0)083013 Grab Surface Water	7182132
WS-012(1.5-2.0)083013 Grab Surface Water	7182133
WS-012(5.0-5.5)083013 Grab Surface Water	7182134
WS-010(1.5-2.0)083013 Grab Surface Water	7182135
WS-010(3.5-4.0)083013 Grab Surface Water	7182136
WS-006(0.5-1.0)083013 Grab Surface Water	7182137
WS-006(0.5-1.0)083013MS Grab Surface Water	7182138
WS-006(0.5-1.0)083013MSD Grab Surface Water	7182139
WS-006(0.5-1.0)083013DUP Grab Surface Water	7182140
WS-005(Surface)083013 Grab Surface Water	7182141
WS-002(Surface)083013 Grab Surface Water	7182142
WS-018(Surface)083013 Grab Surface Water	7182143
WS-011(1.5-2.0)083013 Grab Surface Water	7182144
WS-011(5.0-5.5)083013 Grab Surface Water	7182145
WS-003(Surface)083013 Grab Surface Water	7182146
WS-007(0.5-1.0)083013 Grab Surface Water	7182147
WS-001(0.5-1.0)083013 Grab Surface Water	7182148
WS-EB-046-083013 Grab Water	7182149
WS-TB-137-083013 Water	7182150

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

ELECTRONIC ARCADIS
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COPY TO

Attn: Stephen Barrick

Attn: Lyndi Mott

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

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1415627

General Comments:

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

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

Project specific QC samples are included in this data set

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

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

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

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

Batch #: 13246WAF026 (Sample number(s): 7182131-7182139, 7182141-7182149 UNSPK: 7182137)

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

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7182145, 7182146, 7182148

Sample #s: 7182145, 7182146, 7182148

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 #: 13250807902A (Sample number(s): 7182131-7182148 UNSPK: 7182137 BKG: 7182137)

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

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

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

Sample Description: WS-014(1.5-2.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182131
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 09:10 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1501 SDG#: PEL15-01

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

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Mayflower, AR
Pipeline Incident

LL Sample # WW 7182131
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 09:10 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1501 SDG#: PEL15-01

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	0.2 J	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	0.2 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
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	28.2	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0233	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.48	0.0334	0.200	1

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

Sample Description: WS-014(1.5-2.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182131
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 09:10 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1501 SDG#: PEL15-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.92	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	G132451AA	09/02/2013 15:53	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 15:53	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 04:51	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 04:25	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 04:25	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 04:25	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 04:25	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 04:25	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 04:25	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 04:25	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 04:25	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 04:25	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 04:25	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 04:25	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:01	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

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

Sample Description: WS-014(5.5-6.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182132
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 09:20 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1502 SDG#: PEL15-02

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)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182132
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 09:20 by HVA

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630 Plaza Drive, Suite 600
Highlands Ranch CO 80129

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1502 SDG#: PEL15-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.052	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.052	1
08357	Anthracene	120-12-7	N.D.	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.052	1
08357	Chrysene	218-01-9	N.D.	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.052	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.052	1
08357	Fluorene	86-73-7	N.D.	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.052	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.052	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.052	1
08357	Pyrene	129-00-0	N.D.	0.010	0.052	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	28.5	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0254	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

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

Sample Description: WS-014(5.5-6.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182132
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 09:20 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1502 SDG#: PEL15-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.95	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	G132451AA	09/02/2013 10:49	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 10:49	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 05:21	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 04:29	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 04:29	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 04:29	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 04:29	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 04:29	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 04:29	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 04:29	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 04:29	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 04:29	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 04:29	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 04:29	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:03	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

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

Sample Description: WS-012(1.5-2.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182133
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 09:45 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1503 SDG#: PEL15-03

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)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182133
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 09:45 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1503 SDG#: PEL15-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.052	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.052	1
08357	Anthracene	120-12-7	N.D.	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.052	1
08357	Chrysene	218-01-9	N.D.	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.052	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.052	1
08357	Fluorene	86-73-7	N.D.	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.052	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.052	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.052	1
08357	Pyrene	129-00-0	N.D.	0.010	0.052	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	28.7	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0269	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.59	0.0334	0.200	1

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

Sample Description: WS-012(1.5-2.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182133
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 09:45 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1503 SDG#: PEL15-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.97	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	1.6 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132451AA	09/02/2013 11:11	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 11:11	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 05:50	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 04:40	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 04:40	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 04:40	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 04:40	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 04:40	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 04:40	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 04:40	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 04:40	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 04:40	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 04:40	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 04:40	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:05	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

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

Sample Description: WS-012(5.0-5.5)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182134
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 09:55 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1504 SDG#: PEL15-04

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)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182134
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 09:55 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1504 SDG#: PEL15-04

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.	0.011	0.055	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.055	1
08357	Anthracene	120-12-7	N.D.	0.011	0.055	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.055	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.055	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.055	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.055	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.055	1
08357	Chrysene	218-01-9	N.D.	0.011	0.055	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.055	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.055	1
08357	Fluorene	86-73-7	N.D.	0.011	0.055	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.055	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.055	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.055	1
08357	Naphthalene	91-20-3	N.D.	0.033	0.055	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.055	1
08357	Pyrene	129-00-0	N.D.	0.011	0.055	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	28.4	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0272	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.55	0.0334	0.200	1

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

Sample Description: WS-012(5.0-5.5)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182134
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 09:55 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1504 SDG#: PEL15-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.93	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	1.6 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132451AA	09/02/2013 11:32	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 11:32	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 06:19	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 04:44	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 04:44	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 04:44	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 04:44	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 04:44	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 04:44	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 04:44	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 04:44	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 04:44	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 04:44	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 04:44	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:07	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

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

Sample Description: WS-010(1.5-2.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182135
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 10:15 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1505 SDG#: PEL15-05

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)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182135
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 10:15 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1505 SDG#: PEL15-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.056	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.056	1
08357	Anthracene	120-12-7	N.D.	0.011	0.056	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.056	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.056	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.056	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.056	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.056	1
08357	Chrysene	218-01-9	N.D.	0.011	0.056	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.056	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.056	1
08357	Fluorene	86-73-7	N.D.	0.011	0.056	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.056	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.056	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.056	1
08357	Naphthalene	91-20-3	N.D.	0.033	0.056	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.056	1
08357	Pyrene	129-00-0	N.D.	0.011	0.056	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	29.7	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.161	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.87	0.0334	0.200	1

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

Sample Description: WS-010(1.5-2.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182135
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 10:15 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1505 SDG#: PEL15-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	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.	3.6 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132451AA	09/02/2013 12:16	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 12:16	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 06:49	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 04:48	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 04:48	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 04:48	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 04:48	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 04:48	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 04:48	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 04:48	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 04:48	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 04:48	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 04:48	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 04:48	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:09	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

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

Sample Description: WS-010(3.5-4.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182136
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 10:25 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1506 SDG#: PEL15-06

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 purge	ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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

Sample Description: WS-010(3.5-4.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182136
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 10:25 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1506 SDG#: PEL15-06

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.	0.032	0.054	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.054	1
08357	Pyrene	129-00-0	N.D.	0.011	0.054	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	30.7	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.623	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.19	0.0334	0.200	1

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

Sample Description: WS-010(3.5-4.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182136
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 10:25 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1506 SDG#: PEL15-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.10	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132451AA	09/02/2013 12:38	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 12:38	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 07:18	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 04:51	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 04:51	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 04:51	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 04:51	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 04:51	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 04:51	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 04:51	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 04:51	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 04:51	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 04:51	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 04:51	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:11	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

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

Sample Description: WS-006(0.5-1.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182137
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 10:45 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1507 SDG#: PEL15-07BKG

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)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182137
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 10:45 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1507 SDG#: PEL15-07BKG

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.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	29.2	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0511	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.70	0.0334	0.200	1

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

Sample Description: WS-006(0.5-1.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182137
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 10:45 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1507 SDG#: PEL15-07BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	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	G132451AA	09/02/2013 09:21	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 09:21	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 03:23	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 04:02	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 04:02	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 04:02	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 04:02	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 04:02	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 04:02	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 04:02	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 04:02	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 04:02	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 04:02	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 04:02	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:13	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

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

Sample Description: WS-006(0.5-1.0)083013MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182138
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 10:45 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1507 SDG#: PEL15-07MS

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	36	3.0	5.0	1
02898	Allyl Chloride	107-05-1	4.6	0.1	0.5	1
02898	Benzene	71-43-2	5.3	0.1	0.5	1
02898	Bromobenzene	108-86-1	5.4	0.1	0.5	1
02898	Bromochloromethane	74-97-5	5.6	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	5.1	0.1	0.5	1
02898	Bromoform	75-25-2	5.3	0.1	0.5	1
02898	Bromomethane	74-83-9	5.5	0.1	0.5	1
02898	2-Butanone	78-93-3	34	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	5.3	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	5.6	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	5.6	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	5.9	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.7	0.1	0.5	1
02898	Chloroethane	75-00-3	4.9	0.1	0.5	1
02898	Chloroform	67-66-3	5.6	0.1	0.5	1
02898	Chloromethane	74-87-3	4.7	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.3	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.4	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	6.0	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	5.2	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	5.0	0.1	0.5	1
02898	Dibromomethane	74-95-3	5.1	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.4	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.6	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.5	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	5.7	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.2	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	5.2	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	5.5	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	5.4	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	5.7	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	5.5	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.1	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	4.7	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	5.5	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	5.8	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	5.1	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	4.7	0.1	0.5	1
02898	Ethyl ether	60-29-7	4.2	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.5	0.1	0.5	1
02898	Freon 113	76-13-1	5.7	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	6.0	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	5.7	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	5.5	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	4.7	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	21	1.0	5.0	1
02898	Methylene Chloride	75-09-2	5.1	0.2	0.5	1

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

Sample Description: WS-006(0.5-1.0)083013MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182138
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 10:45 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1507 SDG#: PEL15-07MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	5.3	0.1	0.5	1
02898	Styrene	100-42-5	5.4	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	5.4	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	4.4	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	6.2	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	23	2.0	5.0	1
02898	Toluene	108-88-3	5.4	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	4.9	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	5.3	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	5.9	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	4.8	0.1	0.5	1
02898	Trichloroethene	79-01-6	5.8	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	6.5	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	4.8	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	5.4	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	5.4	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	5.5	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	17	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	1.1	0.010	0.051	1
08357	Acenaphthylene	208-96-8	1.3	0.010	0.051	1
08357	Anthracene	120-12-7	0.56	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.92	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.44	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	1.0	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.97	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.99	0.010	0.051	1
08357	Chrysene	218-01-9	1.0	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	1.1	0.010	0.051	1
08357	Fluoranthene	206-44-0	0.97	0.010	0.051	1
08357	Fluorene	86-73-7	1.2	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	1.1	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	1.2	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	1.2	0.010	0.051	1
08357	Naphthalene	91-20-3	1.2	0.031	0.051	1
08357	Phenanthrene	85-01-8	1.3	0.031	0.051	1
08357	Pyrene	129-00-0	0.99	0.010	0.051	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	47.8	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.165	0.0068	0.0200	1
07046	Barium	7440-39-3	2.19	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0535	0.00076	0.0050	1
01750	Calcium	7440-70-2	10.8	0.0334	0.200	1

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

Sample Description: WS-006(0.5-1.0)083013MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182138
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 10:45 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1507 SDG#: PEL15-07MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	0.208	0.0016	0.0150	1
07055	Lead	7439-92-1	0.165	0.0047	0.0150	1
01757	Magnesium	7439-95-4	5.04	0.0167	0.100	1
07061	Nickel	7440-02-0	0.551	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.160	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0538	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.509	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.0010	0.000060	0.00020	1
Wet Chemistry		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	12.8	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	G132451AA	09/02/2013 09:43	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 09:43	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 03:53	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 04:13	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 04:13	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 04:13	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 04:13	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 04:13	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 04:13	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 04:13	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 04:13	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 04:13	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 04:13	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 04:13	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:21	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

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

Sample Description: WS-006(0.5-1.0)083013MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182139
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 10:45 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1507 SDG#: PEL15-07MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Acetone	67-64-1	37	3.0	5.0	1
02898	Allyl Chloride	107-05-1	4.6	0.1	0.5	1
02898	Benzene	71-43-2	5.3	0.1	0.5	1
02898	Bromobenzene	108-86-1	5.3	0.1	0.5	1
02898	Bromochloromethane	74-97-5	5.6	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	5.2	0.1	0.5	1
02898	Bromoform	75-25-2	5.5	0.1	0.5	1
02898	Bromomethane	74-83-9	5.4	0.1	0.5	1
02898	2-Butanone	78-93-3	34	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	5.3	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	5.5	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	5.5	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	6.0	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.6	0.1	0.5	1
02898	Chloroethane	75-00-3	5.0	0.1	0.5	1
02898	Chloroform	67-66-3	5.6	0.1	0.5	1
02898	Chloromethane	74-87-3	4.7	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.3	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.3	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	5.7	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	5.2	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	4.9	0.1	0.5	1
02898	Dibromomethane	74-95-3	5.1	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.5	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.7	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.5	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	5.8	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.1	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	5.2	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	5.4	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	5.5	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	5.7	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	5.5	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.1	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	4.7	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	5.5	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	5.8	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	5.1	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	4.7	0.1	0.5	1
02898	Ethyl ether	60-29-7	4.2	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.4	0.1	0.5	1
02898	Freon 113	76-13-1	5.7	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	6.0	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	5.8	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	5.5	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	4.7	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	20	1.0	5.0	1
02898	Methylene Chloride	75-09-2	5.0	0.2	0.5	1

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

Sample Description: WS-006(0.5-1.0)083013MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182139
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 10:45 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1507 SDG#: PEL15-07MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	5.3	0.1	0.5	1
02898	Styrene	100-42-5	5.4	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	5.4	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	4.5	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	6.2	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	23	2.0	5.0	1
02898	Toluene	108-88-3	5.5	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	5.0	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	5.3	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	5.9	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	4.8	0.1	0.5	1
02898	Trichloroethene	79-01-6	5.9	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	6.6	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	4.8	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	5.4	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	5.4	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	5.4	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	17	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	1.1	0.011	0.053	1
08357	Acenaphthylene	208-96-8	1.3	0.011	0.053	1
08357	Anthracene	120-12-7	0.61	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	0.92	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	0.47	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	0.99	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	0.95	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	0.95	0.011	0.053	1
08357	Chrysene	218-01-9	0.99	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	1.0	0.011	0.053	1
08357	Fluoranthene	206-44-0	1.2	0.011	0.053	1
08357	Fluorene	86-73-7	1.2	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	1.0	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	1.3	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	1.3	0.011	0.053	1
08357	Naphthalene	91-20-3	1.2	0.032	0.053	1
08357	Phenanthrene	85-01-8	1.3	0.032	0.053	1
08357	Pyrene	129-00-0	1.1	0.011	0.053	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	47.9	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.165	0.0068	0.0200	1
07046	Barium	7440-39-3	2.19	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0543	0.00076	0.0050	1
01750	Calcium	7440-70-2	10.8	0.0334	0.200	1

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

Sample Description: WS-006 (0.5-1.0) 083013MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182139
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 10:45 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1507 SDG#: PEL15-07MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	0.206	0.0016	0.0150	1
07055	Lead	7439-92-1	0.168	0.0047	0.0150	1
01757	Magnesium	7439-95-4	5.07	0.0167	0.100	1
07061	Nickel	7440-02-0	0.559	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.163	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0539	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.508	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.0010	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	26.6	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132451AA	09/02/2013 10:05	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 10:05	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 04:22	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 04:17	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 04:17	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 04:17	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 04:17	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 04:17	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 04:17	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 04:17	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 04:17	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 04:17	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 04:17	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 04:17	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:23	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

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

Sample Description: WS-006(0.5-1.0)083013DUP Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182140
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 10:45 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1507 SDG#: PEL15-07DUP

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SM 2340 B-1997		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	29.3	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	0.0510	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	3.03	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.	4.4 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
06256	Total Hardness as CaCO ₃	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 04:10	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 04:10	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 04:10	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 04:10	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 04:10	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 04:10	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 04:10	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 04:10	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 04:10	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 04:10	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 04:10	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:15	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

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

Sample Description: WS-005(Surface)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182141
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 11:25 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1508 SDG#: PEL15-08

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)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182141
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 11:25 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1508 SDG#: PEL15-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	0.1 J	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	28.7	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0291	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

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

Sample Description: WS-005(Surface)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182141
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 11:25 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1508 SDG#: PEL15-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.93	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	G132451AA	09/02/2013 12:59	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 12:59	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 07:47	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 04:55	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 04:55	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 04:55	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 04:55	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 04:55	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 04:55	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 04:55	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 04:55	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 04:55	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 04:55	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 04:55	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:25	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

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

Sample Description: WS-002(Surface)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182142
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 12:05 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1509 SDG#: PEL15-09

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)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182142
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 12:05 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1509 SDG#: PEL15-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.016 J	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.013 J	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	0.011 J	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	29.4	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0261	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.87	0.0334	0.200	1

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

Sample Description: WS-002(Surface)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182142
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 12:05 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1509 SDG#: PEL15-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.98	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	G132451AA	09/02/2013 13:21	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 13:21	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 08:17	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 04:59	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 04:59	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 04:59	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 04:59	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 04:59	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 04:59	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 04:59	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 04:59	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 04:59	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 04:59	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 04:59	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:27	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

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

Sample Description: WS-018(Surface)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182143
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 13:25 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1510 SDG#: PEL15-10

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

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

Sample Description: WS-018(Surface)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182143
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 13:25 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1510 SDG#: PEL15-10

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	0.1 J	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
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
	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	0.0846	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.64	0.0334	0.200	1

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

Sample Description: WS-018(Surface)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182143
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 13:25 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1510 SDG#: PEL15-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.06	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	G132451AA	09/02/2013 13:43	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 13:43	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 08:46	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 05:03	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 05:03	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 05:03	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 05:03	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 05:03	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 05:03	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 05:03	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 05:03	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 05:03	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 05:03	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 05:03	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:29	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

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

Sample Description: WS-011(1.5-2.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182144
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 12:40 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1511 SDG#: PEL15-11

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

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

Sample Description: WS-011(1.5-2.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182144
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 12:40 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1511 SDG#: PEL15-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.052	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.052	1
08357	Anthracene	120-12-7	N.D.	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.052	1
08357	Chrysene	218-01-9	N.D.	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.052	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.052	1
08357	Fluorene	86-73-7	N.D.	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.052	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.052	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.052	1
08357	Pyrene	129-00-0	N.D.	0.010	0.052	1
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
	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	0.0216	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.61	0.0334	0.200	1

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

Sample Description: WS-011(1.5-2.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182144
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 12:40 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1511 SDG#: PEL15-11

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	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.05	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	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	G132451AA	09/02/2013 14:05	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 14:05	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 09:16	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 05:07	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 05:07	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 05:07	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 05:07	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 05:07	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 05:07	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 05:07	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 05:07	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 05:07	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 05:07	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 05:07	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:31	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

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

Sample Description: WS-011(5.0-5.5)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182145
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 12:50 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1512 SDG#: PEL15-12

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 purge	ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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

Sample Description: WS-011(5.0-5.5)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182145
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 12:50 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1512 SDG#: PEL15-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.						
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO ₃	471-34-1	28.7	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0475	0.00033	0.0050	1

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

Sample Description: WS-011(5.0-5.5)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182145
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 12:50 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1512 SDG#: PEL15-12

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	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.59	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.96	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132451AA	09/02/2013 14:27	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 14:27	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 09:46	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 05:11	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 05:11	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 05:11	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 05:11	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 05:11	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 05:11	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 05:11	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 05:11	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 05:11	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 05:11	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 05:11	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:33	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1

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

Sample Description: WS-011(5.0-5.5)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182145
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 12:50 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1512 SDG#: PEL15-12

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

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

Sample Description: WS-003(Surface)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182146
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 13:35 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1513 SDG#: PEL15-13

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

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

Sample Description: WS-003(Surface)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182146
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 13:35 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1513 SDG#: PEL15-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	0.3 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	0.1 J	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.						
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO ₃	471-34-1	29.6	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0760	0.00033	0.0050	1

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

Sample Description: WS-003(Surface)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182146
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 13:35 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1513 SDG#: PEL15-13

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	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.73	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.10	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132451AA	09/02/2013 14:48	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 14:48	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 10:15	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 05:14	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 05:14	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 05:14	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 05:14	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 05:14	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 05:14	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 05:14	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 05:14	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 05:14	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 05:14	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 05:14	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:35	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1

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

Sample Description: WS-003 (Surface) 083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182146
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 13:35 by HVA

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/31/2013 08:50

Highlands Ranch CO 80129

Reported: 09/10/2013 08:35

P1513 SDG#: PEL15-13

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

Sample Description: WS-007(0.5-1.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182147
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 14:00 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1514 SDG#: PEL15-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Acetone	67-64-1	3.9 J	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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

Sample Description: WS-007(0.5-1.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182147
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 14:00 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1514 SDG#: PEL15-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	0.014 J	0.010	0.051	1
08357	Acenaphthylene	208-96-8	0.051 J	0.010	0.051	1
08357	Anthracene	120-12-7	0.085	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.14	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.13	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.37	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.14	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.23	0.010	0.051	1
08357	Chrysene	218-01-9	0.43	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	0.043 J	0.010	0.051	1
08357	Fluoranthene	206-44-0	0.47	0.010	0.051	1
08357	Fluorene	86-73-7	0.024 J	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.18	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	0.011 J	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	0.12	0.031	0.051	1
08357	Pyrene	129-00-0	0.43	0.010	0.051	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	16.9	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0445	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	3.83	0.0334	0.200	1

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

Sample Description: WS-007(0.5-1.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182147
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 14:00 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1514 SDG#: PEL15-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	0.0021 J	0.0016	0.0150	1
07055	Lead	7439-92-1	0.0132 J	0.0047	0.0150	1
01757	Magnesium	7439-95-4	1.79	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0037 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.0054	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	1.7 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132451AA	09/02/2013 15:10	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 15:10	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 10:45	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 05:26	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 05:26	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 05:26	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 05:26	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 05:26	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 05:26	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 05:26	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 05:26	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 05:26	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 05:26	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 05:26	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:37	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

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

Sample Description: WS-001(0.5-1.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182148
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 14:15 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1515 SDG#: PEL15-15

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)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182148
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 14:15 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1515 SDG#: PEL15-15

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.	0.031	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 recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.						
Metals	SM 2340 B-1997		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	28.9	0.033	0.20	1
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0615	0.00033	0.0050	1

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

Sample Description: WS-001(0.5-1.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182148
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 14:15 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1515 SDG#: PEL15-15

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	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.61	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	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.	3.8 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132451AA	09/02/2013 15:31	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 15:31	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 11:14	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 05:29	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 05:29	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 05:29	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 05:29	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 05:29	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 05:29	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 05:29	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 05:29	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 05:29	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 05:29	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 05:29	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:39	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1

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

Sample Description: WS-001(0.5-1.0)083013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182148
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 14:15 by HVA

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/31/2013 08:50

Highlands Ranch CO 80129

Reported: 09/10/2013 08:35

P1515 SDG#: PEL15-15

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13250807902A	09/07/2013 04:56	Yolunder Y Bunch	1

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

Sample Description: WS-EB-046-083013 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182149
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 15:00 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1516 SDG#: PEL15-16EB

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

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

Sample Description: WS-EB-046-083013 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182149
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 15:00 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1516 SDG#: PEL15-16EB

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	6.0	2.0	5.0	1
02898	Toluene	108-88-3	0.2 J	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	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	0.055	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.055	1
08357	Anthracene	120-12-7	N.D.	0.011	0.055	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.055	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.055	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.055	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.055	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.055	1
08357	Chrysene	218-01-9	N.D.	0.011	0.055	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.055	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.055	1
08357	Fluorene	86-73-7	N.D.	0.011	0.055	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.055	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.055	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.055	1
08357	Naphthalene	91-20-3	N.D.	0.033	0.055	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.055	1
08357	Pyrene	129-00-0	N.D.	0.011	0.055	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	0.21	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	N.D.	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	0.0841 J	0.0334	0.200	1

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

Sample Description: WS-EB-046-083013 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182149
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013 15:00 by HVA

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

Submitted: 08/31/2013 08:50

Reported: 09/10/2013 08:35

P1516 SDG#: PEL15-16EB

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

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132451AA	09/02/2013 08:38	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 08:38	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAF026	09/05/2013 11:44	Brian K Graham	1
10470	BNP Water Extraction (SIM)	SW-846 3510C	1	13246WAF026	09/03/2013 23:45	Karen L Beyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132476256011	09/04/2013 06:55	Jennifer L Moyer	1
07035	Arsenic	SW-846 6010B	1	132461848001	09/04/2013 05:33	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132461848001	09/04/2013 05:33	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132461848001	09/04/2013 05:33	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132461848001	09/04/2013 05:33	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132461848001	09/04/2013 05:33	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132461848001	09/04/2013 05:33	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132461848001	09/04/2013 05:33	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132461848001	09/04/2013 05:33	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132461848001	09/04/2013 05:33	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132461848001	09/04/2013 05:33	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132461848001	09/04/2013 05:33	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132465713001	09/04/2013 07:46	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132461848001	09/03/2013 12:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132465713001	09/03/2013 15:00	Nelli S Markaryan	1

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

Sample Description: WS-TB-137-083013 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182150
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013

ExxonMobil c/o Arcadis

Submitted: 08/31/2013 08:50

630 Plaza Drive, Suite 600

Reported: 09/10/2013 08:35

Highlands Ranch CO 80129

P1517 SDG#: PEL15-17TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	0.3 J	0.2	0.5	1

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

Sample Description: WS-TB-137-083013 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7182150
LL Group # 1415627
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/30/2013

ExxonMobil c/o Arcadis

Submitted: 08/31/2013 08:50

630 Plaza Drive, Suite 600

Reported: 09/10/2013 08:35

Highlands Ranch CO 80129

P1517 SDG#: PEL15-17TB*

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

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132451AA	09/02/2013 09:00	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132451AA	09/02/2013 09:00	Jason M Long	1

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

Quality Control SummaryClient Name: ExxonMobil c/o Arcadis
Reported: 09/10/13 at 08:35 AM

Group Number: 1415627

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: G132451AA	Sample number(s): 7182131-7182139, 7182141-7182150								
Acetone	N.D.	3.0	5.0	ug/l	95		60-139		
Allyl Chloride	N.D.	0.1	0.5	ug/l	84		61-130		
Benzene	N.D.	0.1	0.5	ug/l	100		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	103		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	109		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	101		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	106		73-128		
Bromomethane	N.D.	0.1	0.5	ug/l	105		62-126		
2-Butanone	N.D.	1.0	5.0	ug/l	88		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	95		80-120		
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	100		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	102		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	106		80-129		
Chlorobenzene	N.D.	0.1	0.5	ug/l	106		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	93		68-120		
Chloroform	N.D.	0.1	0.5	ug/l	106		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	88		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	101		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	110		64-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	104		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	98		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	99		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	106		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	106		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	103		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	102		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	98		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	105		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	103		75-145		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	98		80-120		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	91		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	100		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	99		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	97		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	104		73-120		

*- Outside of specification

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

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1415627

Reported: 09/10/13 at 08:35 AM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Isopropylbenzene	N.D.	0.1	0.5	ug/l	105		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	100		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	84		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	98		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	96		80-120		
Styrene	N.D.	0.1	0.5	ug/l	104		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	104		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	89		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	114		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	95		65-131		
Toluene	N.D.	0.1	0.5	ug/l	101		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	92		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	100		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	106		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	96		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	110		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	115		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	96		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	101		80-120		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	101		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	97		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	105		80-120		

Batch number: 13246WAF026	Sample number(s): 7182131-7182139, 7182141-7182149								
Acenaphthene	N.D.	0.010	0.050	ug/l	105		77-118		
Acenaphthylene	N.D.	0.010	0.050	ug/l	111		80-123		
Anthracene	N.D.	0.010	0.050	ug/l	108		78-123		
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	94		73-127		
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	104		72-120		
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	114		79-136		
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	116		64-130		
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	116		73-131		
Chrysene	N.D.	0.010	0.050	ug/l	105		76-125		
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	111		58-131		
Fluoranthene	N.D.	0.010	0.050	ug/l	108		79-124		
Fluorene	N.D.	0.010	0.050	ug/l	102		74-115		
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	119		62-130		
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	110		80-126		
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	110		81-124		
Naphthalene	N.D.	0.030	0.050	ug/l	104		75-120		
Phenanthrene	N.D.	0.030	0.050	ug/l	104		75-120		
Pyrene	N.D.	0.010	0.050	ug/l	101		71-130		

Batch number: 132461848001	Sample number(s): 7182131-7182149								
Arsenic	N.D.	0.0068	0.0200	mg/l	106		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	106		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	107		90-112		
Calcium	0.0368 J	0.0334	0.200	mg/l	104		90-110		
Chromium	N.D.	0.0016	0.0150	mg/l	101		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	109		88-110		
Magnesium	N.D.	0.0167	0.100	mg/l	102		90-110		
Nickel	N.D.	0.0015	0.0100	mg/l	111		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	107		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	106		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	99		90-110		

*- Outside of specification

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

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/10/13 at 08:35 AM

Group Number: 1415627

<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: 132465713001 Mercury	Sample number(s): 7182131-7182149 N.D.	0.00006	0.00020	mg/l	100		80-120		
Batch number: 13250807902A HEM (oil & grease)	Sample number(s): 7182131-7182148 N.D.	1.4	5.0	mg/l	93	89	78-114	5	16

Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: G132451AA	Sample number(s): 7182131-7182139, 7182141-7182150 UNSPK: 7182137								
Acetone	97	99	57-163	2	30				
Allyl Chloride	92	91	56-160	0	30				
Benzene	105	106	87-126	0	30				
Bromobenzene	107	106	80-123	1	30				
Bromochloromethane	111	112	82-125	0	30				
Bromodichloromethane	102	104	82-133	2	30				
Bromoform	106	109	60-138	3	30				
Bromomethane	109	109	66-130	0	30				
2-Butanone	92	90	56-160	2	30				
n-Butylbenzene	107	107	83-131	0	30				
sec-Butylbenzene	111	111	84-128	0	30				
tert-Butylbenzene	111	110	84-135	1	30				
Carbon Tetrachloride	118	119	81-148	1	30				
Chlorobenzene	113	112	78-133	1	30				
Chloroethane	97	100	70-139	2	30				
Chloroform	111	111	86-136	0	30				
Chloromethane	94	93	49-135	1	30				
2-Chlorotoluene	107	107	75-134	0	30				
4-Chlorotoluene	107	106	76-134	1	30				
1,2-Dibromo-3-chloropropane	120	115	43-143	4	30				
Dibromochloromethane	105	104	79-125	1	30				
1,2-Dibromoethane	100	98	84-127	2	30				
Dibromomethane	101	101	83-126	0	30				
1,2-Dichlorobenzene	108	109	83-117	1	30				
1,3-Dichlorobenzene	112	113	79-132	1	30				
1,4-Dichlorobenzene	111	110	79-120	0	30				
Dichlorodifluoromethane	115	116	28-136	1	30				
1,1-Dichloroethane	103	102	88-136	1	30				
1,2-Dichloroethane	103	104	82-135	1	30				
1,1-Dichloroethene	111	108	83-150	3	30				
cis-1,2-Dichloroethene	109	110	82-129	1	30				
trans-1,2-Dichloroethene	115	114	88-127	1	30				
Dichlorofluoromethane	110	111	81-161	0	30				
1,2-Dichloropropane	102	102	91-126	0	30				
1,3-Dichloropropane	93	94	80-127	1	30				
2,2-Dichloropropane	111	111	80-134	0	30				
1,1-Dichloropropene	116	115	86-139	0	30				

*- Outside of specification

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1415627

Reported: 09/10/13 at 08:35 AM

Sample Matrix Quality Control

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

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
cis-1,3-Dichloropropene	101	102	74-132	0	30				
trans-1,3-Dichloropropene	95	95	71-128	0	30				
Ethyl ether	85	85	57-139	0	30				
Ethylbenzene	109	108	80-140	1	30				
Freon 113	115	114	77-147	1	30				
Hexachlorobutadiene	120	120	65-128	0	30				
Isopropylbenzene	115	115	81-133	0	30				
p-Isopropyltoluene	109	110	84-124	0	30				
Methyl Tertiary Butyl Ether	94	95	82-132	0	30				
4-Methyl-2-Pentanone	82	81	69-149	2	30				
Methylene Chloride	101	100	77-135	1	30				
n-Propylbenzene	106	106	79-131	0	30				
Styrene	109	107	63-151	2	30				
1,1,1,2-Tetrachloroethane	107	108	87-126	1	30				
1,1,2,2-Tetrachloroethane	88	89	75-131	1	30				
Tetrachloroethene	125	124	75-129	0	30				
Tetrahydrofuran	91	93	56-154	2	30				
Toluene	106	107	83-127	1	30				
1,2,3-Trichlorobenzene	97	99	73-125	2	30				
1,2,4-Trichlorobenzene	107	107	77-120	0	30				
1,1,1-Trichloroethane	117	118	85-140	0	30				
1,1,2-Trichloroethane	97	97	85-129	0	30				
Trichloroethene	117	118	85-131	1	30				
Trichlorofluoromethane	129	132	73-139	2	30				
1,2,3-Trichloropropane	96	96	76-120	0	30				
1,2,4-Trimethylbenzene	108	108	87-126	0	30				
1,3,5-Trimethylbenzene	108	109	89-129	1	30				
Vinyl Chloride	110	108	62-135	2	30				
Xylene (Total)	113	112	81-137	1	30				

Batch number: 13246WAF026

Sample number(s): 7182131-7182139,7182141-7182149 UNSPK: 7182137

Acenaphthene	106	104	47-136	1	30
Acenaphthylene	122	120	33-146	2	30
Anthracene	55*	57*	69-119	7	30
Benzo(a)anthracene	89	86	37-150	1	30
Benzo(a)pyrene	43*	44*	64-123	6	30
Benzo(b)fluoranthene	98	93	33-152	2	30
Benzo(g,h,i)perylene	95	89	36-138	3	30
Benzo(k)fluoranthene	96	89	31-142	4	30
Chrysene	97	93	34-135	1	30
Dibenz(a,h)anthracene	106	95	17-134	7	30
Fluoranthene	94	113	39-147	21	30
Fluorene	113	111	38-149	1	30
Indeno(1,2,3-cd)pyrene	108	98	29-143	6	30
1-Methylnaphthalene	120	120	49-152	4	30
2-Methylnaphthalene	117	118	51-146	4	30
Naphthalene	113	114	58-131	5	30
Phenanthrene	122	122	48-140	3	30
Pyrene	96	106	59-125	13	30

Batch number: 132461848001

Sample number(s): 7182131-7182149 UNSPK: 7182137 BKG: 7182137

Arsenic	110	110	81-123	0	20	N.D.	N.D.	0 (1)	20
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*- Outside of specification

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

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/10/13 at 08:35 AM

Group Number: 1415627

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Barium	107	107	78-118	0	20	0.0511	0.0510	0	20
Cadmium	107	109	83-116	1	20	N.D.	N.D.	0 (1)	20
Calcium	103	103	81-118	0	20	6.70	6.72	0	20
Chromium	104	103	81-120	1	20	N.D.	N.D.	0 (1)	20
Lead	110	112	75-125	2	20	N.D.	N.D.	0 (1)	20
Magnesium	101	102	75-125	1	20	3.03	3.03	0	20
Nickel	110	112	86-115	1	20	N.D.	N.D.	0 (1)	20
Selenium	107	109	75-125	2	20	N.D.	N.D.	0 (1)	20
Silver	108	108	75-125	0	20	N.D.	N.D.	0 (1)	20
Vanadium	102	102	90-111	0	20	N.D.	N.D.	0 (1)	20

Batch number: 132465713001
Mercury

Sample number(s): 7182131-7182149 UNSPK: 7182137 BKG: 7182137
104 101 80-120 3 20 N.D. N.D. 0 (1) 20

Batch number: 13250807902A
HEM (oil & grease)

Sample number(s): 7182131-7182148 UNSPK: 7182137 BKG: 7182137
30* 62* 78-114 70* 29 N.D. 4.4 J 200* (1) 18

Surrogate Quality Control

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

Analysis Name: BTEX 25-ml purge
Batch number: G132451AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7182131	105	100	98	96
7182132	103	100	99	96
7182133	103	98	98	96
7182134	103	99	99	96
7182135	103	100	99	95
7182136	103	97	97	95
7182137	104	101	98	96
7182138	102	100	99	94
7182139	103	98	98	95
7182141	102	101	99	96
7182142	102	97	97	95
7182143	103	99	98	95
7182144	103	99	98	96
7182145	103	99	98	95
7182146	103	100	98	95
7182147	105	101	98	95
7182148	102	100	97	95
7182149	103	102	97	97
7182150	103	99	99	96
Blank	103	100	97	95
LCS	103	97	99	96
MS	102	100	99	94
MSD	103	98	98	95

*- 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 08:35 AM

Group Number: 1415627

Surrogate Quality Control

Limits:		77-114	74-113	77-110	78-110
Analysis Name: PAHs in waters by SIM					
Batch number: 13246WAF026					
	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10		
7182131	90	79	104		
7182132	103	92	116		
7182133	92	79	111		
7182134	83	67	95		
7182135	89	73	115		
7182136	89	71	116		
7182137	86	70	116		
7182138	102	75	118		
7182139	103	70	119		
7182141	78	93	112		
7182142	89	85	119		
7182143	100	72	115		
7182144	105	88	118		
7182145	86	52*	108		
7182146	65	32*	91		
7182147	71	91	117		
7182148	84	47*	110		
7182149	96	107	110		
Blank	94	105	107		
LCS	95	108	109		
MS	102	75	118		
MSD	103	70	119		
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.

Acct. # 14739

Group # 1415627

Sample # 7182131-5

Instructions on reverse side correspond with circled numbers

1 of 2

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

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

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only
Group # 1415627 Sample # 7182131-50
Instructions on reverse side correspond with circled numbers.

2 of 2

[illegible]

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

Kathy Klinefelter

14739, 1415627, 7182131-50

From: Chandler, Jennifer [Jennifer.Chandler@arcadis-us.com]
Sent: Wednesday, September 04, 2013 12:08 PM
To: Kathy Klinefelter; Mott, Lyndi
Subject: RE: Mayflower Surface water sampling COCs and tracking numbers 083013

Hi Kathy,

Yes, you have entered (the items listed below) correctly. Thank you for correcting these errors.

Thanks,

Jennifer Chandler | Scientist 2 | jennifer.chandler@arcadis-us.com
ARCADIS U.S., Inc. | 630 Plaza Drive, Suite 100 | Highlands Ranch, CO, 80129
T. 303.471.3549 | F. 720.344.3535

www.arcadis-us.com

Please consider the environment before printing this email.

From: Kathy Klinefelter [mailto:KKlinefelter@lancasterlabs.com]
Sent: Wednesday, September 04, 2013 9:54 AM
To: Mott, Lyndi; Chandler, Jennifer
Subject: FW: Mayflower Surface water sampling COCs and tracking numbers 083013

Hello,

Please see the attached COCs. The following discrepancies were noted.

The dissolved metals bottle for WS-011(1.5-2.0)083013 was labeled WS-011(0.5-1.0)083013. We entered the sample ID for dissolved metals per the COC as WS-011(1.5-2.0)083013.

The O&G and PAHs bottles for WS-001(0.5-1.0)083013 were labeled with collection time of 1445. We entered the collection time as 1415 per the COC and times on the labels for the VOCs, Metals and Dissolved Metals bottles submitted for this location.

Please confirm that we have entered correctly per the information on the COCs.

Thanks,

Kathy Klinefelter
Principal Project Manager, Environmental Client Services

Eurofins Lancaster Laboratories
Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601
Phone: 717-556-7256
Fax: 717-656-6766

Website: www.LancasterLabsEnv.com

From: Van Aller, Hans [mailto:Hans.VanAller@arcadis-us.com]
Sent: Friday, August 30, 2013 7:18 PM
To: Kathy Klinefelter; Mott, Lyndi; Barrick, Stephen; Brewer, Stacey; Kull, Valerie; SA Env Entry; Capria, Dennis; Rachel L. Kreamer; McKenzie, Mary; Chandler, Jennifer
Cc: Molina, Joe; Lipka, Shelby; Parmelee, Rhiannon; Pritchard, Jamie; Drost, Dave
Subject: Mayflower Surface water sampling COCs and tracking numbers 083013

9/4/2013

14139, 1415627, 7182131-50

Attached are the COCs and tracking numbers from today's surface water sampling activities.

Thanks,

Tyler Milburn, G.I.T. | Geologist 1 | tyler.milburn@arcadis-us.com
ARCADIS U.S., Inc. | 2464 Fortune Dr., Suite 170 | Lexington, KY 40509
T: 859.253.9036 | M: 859.559.5680 | F: 859.253.9136
www.arcadis-us.com

ARCADIS, Imagine the result
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9/4/2013

Environmental Sample Administration
Receipt Documentation Log

C# 1415627

Client/Project: ExxonMobilShipping Container Sealed: YES NODate of Receipt: 8/31/13Custody Seal Present *: YES NOTime of Receipt: 850

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

Source Code: 60-1Package: Chilled Not Chilled

Temperature of Shipping Containers

Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT121	1.0	TB	WI	Y	B	
2	↓	0.6	↓	↓	↓	↓	
3	↓	4.2	↓	↓	↓	↓	
4	↓	1.6	↓	↓	↓	↓	
5	↓	3.0	↓	↓	↓	↓	
6	↓	2.3	↓	↓	↓	↓	

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

Paperwork Discrepancy/Unpacking Problems:

dissolved metals bottle for WS-011(1.5-2.0) labeled WS-011(0.5-1.0)OTG bottles and both ampers for WS-001(0.5-1.0) times=1445Unpacker Signature/Emp#: [Signature] 2308 Date/Time: 8/31/13 1122

Issued by Dept. 6042 Management

Environmental Sample Administration
Receipt Documentation Log

C#1415627

Client/Project: Exxon MobilShipping Container Sealed: YES NODate of Receipt: 8/31/13Custody Seal Present * : YES NOTime of Receipt: 850

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

Source Code: 60-1Package: Chilled Not Chilled

Temperature of Shipping Containers

Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
<u>✓ 1</u>	<u>DT121</u>	<u>0.8</u>	<u>TB</u>	<u>WI</u>	<u>Y</u>	<u>B</u>	
<u>2</u>							
<u>3</u>							
<u>4</u>							
<u>5</u>							
<u>6</u>							

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: [Signature] 2308 Date/Time: 8/31/13 1122

Issued by Dept. 6042 Management

Explanation of Symbols and Abbreviations

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

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

Data Qualifiers:

C – result confirmed by reanalysis.

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

U.S. EPA CLP Data Qualifiers:

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

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

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

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

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

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