

ANALYTICAL RESULTS

Prepared by:

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Lancaster, PA 17601

Prepared for:

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

August 28, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 08/21/2013

Group Number: 1413017

SDG: PEK89

PO Number: B0086003.1301

State of Sample Origin: AR

Client Sample DescriptionLancaster Labs (LL) #

WS-014(1.5-2.0)082013 Grab Surface Water	7168641
WS-014(5.5-6.0)082013 Grab Surface Water	7168642
WS-012(1.5-2.0)082013 Grab Surface Water	7168643
WS-012(5.0-5.5)082013 Grab Surface Water	7168644
WS-010(1.5-2.0)082013 Grab Surface Water	7168645
WS-010(3.5-4.0)082013 Grab Surface Water	7168646
WS-006(0.5-1.0)082013 Grab Surface Water	7168647
WS-006(0.5-1.0)082013MS Grab Surface Water	7168648
WS-006(0.5-1.0)082013MSD Grab Surface Water	7168649
WS-006(0.5-1.0)082013DUP Grab Surface Water	7168650
WS-005(Surface)082013 Grab Surface Water	7168651
WS-002(Surface)082013 Grab Surface Water	7168652
WS-018(Surface)082013 Grab Surface Water	7168653
WS-011(1.5-2.0)082013 Grab Surface Water	7168654
WS-011(5.0-5.5)082013 Grab Surface Water	7168655
WS-003(Surface)082013 Grab Surface Water	7168656
WS-007(0.5-1.0)082013 Grab Surface Water	7168657
WS-001(0.5-1.0)082013 Grab Surface Water	7168658
WS-EB-036-082013 Grab Water	7168659
WS-TB-128-082013 Water	7168660

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
ELECTRONIC COPY TO	ExxonMobil	Attn: Carl Wideman

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1413017

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 #: 13234WAA026 (Sample number(s): 7168641-7168649, 7168651-7168659 UNSPK: 7168647)

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) 7168646, 7168648, 7168651, 7168653, 7168655, 7168658, MS

Sample #s: 7168646, 7168648, 7168651, 7168653, 7168655, 7168658

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.

SW-846 6010B, Metals

Batch #: 132331848005 (Sample number(s): 7168641-7168659 UNSPK: 7168647 BKG: 7168647)

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

EPA 1664A, Wet Chemistry

Batch #: 13239807903A (Sample number(s): 7168641-7168658 UNSPK: 7168647 BKG: 7168647)

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

Sample Description: WS-014(1.5-2.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168641
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 09:00 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20141 SDG#: PEK89-01

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

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

Sample Description: WS-014(1.5-2.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168641
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 09:00 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20141 SDG#: PEK89-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	25.3	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	0.0243	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.70	0.0334	0.200	1

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

Sample Description: WS-014(1.5-2.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168641
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 09:00 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20141 SDG#: PEK89-01

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	2.69	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	G132341AA	08/22/2013 13:16	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 13:16	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/24/2013 14:07	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 19:34	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 19:34	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 19:34	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 19:34	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 19:34	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 19:34	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 19:34	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 19:34	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 19:34	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 19:34	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 19:34	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 08:48	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

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

Sample Description: WS-014(5.5-6.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168642
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 09:10 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20142 SDG#: PEK89-02

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	0.9	0.2	0.5	1

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

Sample Description: WS-014(5.5-6.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168642
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 09:10 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20142 SDG#: PEK89-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	0.2 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.	0.010	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	25.5	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	0.0341	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.75	0.0334	0.200	1

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

Sample Description: WS-014(5.5-6.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168642
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 09:10 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20142 SDG#: PEK89-02

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	2.71	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	G132341AA	08/22/2013 13:37	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 13:37	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/24/2013 14:36	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 19:38	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 19:38	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 19:38	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 19:38	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 19:38	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 19:38	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 19:38	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 19:38	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 19:38	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 19:38	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 19:38	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 08:50	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

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

Sample Description: WS-012(1.5-2.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168643
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20121 SDG#: PEK89-03

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	0.6	0.2	0.5	1

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

Sample Description: WS-012(1.5-2.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168643
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20121 SDG#: PEK89-03

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	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	24.3	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	0.0239	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.48	0.0334	0.200	1

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

Sample Description: WS-012(1.5-2.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168643
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20121 SDG#: PEK89-03

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	2.59	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	G132341AA	08/22/2013 13:59	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 13:59	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/24/2013 15:06	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 19:50	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 19:50	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 19:50	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 19:50	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 19:50	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 19:50	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 19:50	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 19:50	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 19:50	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 19:50	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 19:50	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 08:52	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

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

Sample Description: WS-012(5.0-5.5)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168644
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 09:40 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20122 SDG#: PEK89-04

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)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168644
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 09:40 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20122 SDG#: PEK89-04

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	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.	0.010	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	25.4	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	0.0409	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.71	0.0334	0.200	1

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

Sample Description: WS-012(5.0-5.5)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168644
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 09:40 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20122 SDG#: PEK89-04

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	2.71	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	1.7 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132341AA	08/22/2013 14:20	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 14:20	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/24/2013 15:35	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 19:54	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 19:54	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 19:54	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 19:54	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 19:54	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 19:54	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 19:54	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 19:54	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 19:54	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 19:54	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 19:54	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 08:54	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

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

Sample Description: WS-010(1.5-2.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168645
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:00 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20101 SDG#: PEK89-05

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	0.2 J	0.2	0.5	1

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

Sample Description: WS-010(1.5-2.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168645
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:00 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20101 SDG#: PEK89-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	24.1	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.0070 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0275	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.41	0.0334	0.200	1

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

Sample Description: WS-010(1.5-2.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168645
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:00 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20101 SDG#: PEK89-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.57	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	2.8 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132341AA	08/22/2013 14:42	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 14:42	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/24/2013 16:05	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 19:58	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 19:58	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 19:58	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 19:58	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 19:58	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 19:58	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 19:58	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 19:58	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 19:58	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 19:58	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 19:58	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 08:56	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

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

Sample Description: WS-010(3.5-4.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168646
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:10 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20102 SDG#: PEK89-06

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)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168646
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:10 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20102 SDG#: PEK89-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.						
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO ₃	471-34-1	24.9	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	0.0548	0.00033	0.0050	1

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

Sample Description: WS-010(3.5-4.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168646
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:10 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20102 SDG#: PEK89-06

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	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.61	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.64	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	G132341AA	08/22/2013 15:03	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 15:03	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/24/2013 16:34	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 20:02	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 20:02	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 20:02	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 20:02	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 20:02	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 20:02	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 20:02	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 20:02	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 20:02	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 20:02	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 20:02	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 08:58	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1

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

Sample Description: WS-010(3.5-4.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168646
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:10 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20102 SDG#: PEK89-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

Sample Description: WS-006(0.5-1.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168647
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:30 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20006 SDG#: PEK89-07BKG

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)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168647
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:30 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20006 SDG#: PEK89-07BKG

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	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	24.2	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.0080 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0235	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.47	0.0334	0.200	1

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

Sample Description: WS-006(0.5-1.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168647
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:30 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20006 SDG#: PEK89-07BKG

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	2.57	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	G132341AA	08/22/2013 11:06	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 11:06	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/24/2013 11:39	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 19:10	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 19:10	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 19:10	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 19:10	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 19:10	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 19:10	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 19:10	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 19:10	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 19:10	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 19:10	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 19:10	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 09:01	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

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

Sample Description: WS-006(0.5-1.0)082013MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168648
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:30 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20006 SDG#: PEK89-07MS

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	35	3.0	5.0	1
02898	Allyl Chloride	107-05-1	4.9	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	5.2	0.1	0.5	1
02898	Bromomethane	74-83-9	5.4	0.1	0.5	1
02898	2-Butanone	78-93-3	37	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	4.9	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	5.2	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	5.3	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	6.2	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.5	0.1	0.5	1
02898	Chloroethane	75-00-3	5.0	0.1	0.5	1
02898	Chloroform	67-66-3	5.7	0.1	0.5	1
02898	Chloromethane	74-87-3	4.6	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.1	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.0	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	5.6	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	5.1	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	5.0	0.1	0.5	1
02898	Dibromomethane	74-95-3	5.2	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.3	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.4	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.4	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	4.8	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.3	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	5.6	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	5.6	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	5.4	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	5.7	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	6.0	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	5.8	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	5.9	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	4.8	0.1	0.5	1
02898	Ethyl ether	60-29-7	4.7	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.4	0.1	0.5	1
02898	Freon 113	76-13-1	6.1	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	6.0	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	5.6	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	5.2	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	5.0	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	23	1.0	5.0	1
02898	Methylene Chloride	75-09-2	5.1	0.2	0.5	1

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

Sample Description: WS-006(0.5-1.0)082013MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168648
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:30 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20006 SDG#: PEK89-07MS

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	5.0	0.1	0.5	1
02898	Styrene	100-42-5	5.3	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	5.3	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	4.2	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	6.4	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	25	2.0	5.0	1
02898	Toluene	108-88-3	5.2	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	4.5	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	5.1	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	6.1	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	4.7	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	5.1	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	5.1	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	5.2	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	16	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	0.98	0.010	0.052	1
08357	Acenaphthylene	208-96-8	1.2	0.010	0.052	1
08357	Anthracene	120-12-7	0.33	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	0.78	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	0.41	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	0.90	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	0.77	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	0.85	0.010	0.052	1
08357	Chrysene	218-01-9	0.94	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	0.81	0.010	0.052	1
08357	Fluoranthene	206-44-0	1.0	0.010	0.052	1
08357	Fluorene	86-73-7	1.1	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.81	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	1.2	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	1.2	0.010	0.052	1
08357	Naphthalene	91-20-3	1.1	0.031	0.052	1
08357	Phenanthrene	85-01-8	1.1	0.031	0.052	1
08357	Pyrene	129-00-0	0.93	0.010	0.052	1
The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.						
Metals	SM 2340 B-1997		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	42.4	0.033	0.20	1
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.155	0.0068	0.0200	1
07046	Barium	7440-39-3	2.03	0.00033	0.0050	1

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

Sample Description: WS-006 (0.5-1.0) 082013MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168648
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:30 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20006 SDG#: PEK89-07MS

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	
07049	Cadmium	7440-43-9	0.0509	0.00076	0.0050	1
01750	Calcium	7440-70-2	9.46	0.0334	0.200	1
07051	Chromium	7440-47-3	0.201	0.0016	0.0150	1
07055	Lead	7439-92-1	0.155	0.0047	0.0150	1
01757	Magnesium	7439-95-4	4.57	0.0167	0.100	1
07061	Nickel	7440-02-0	0.516	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.148	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0460	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.501	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.00097	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	18.8	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	G132341AA	08/22/2013 11:28	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 11:28	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/24/2013 12:09	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 19:22	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 19:22	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 19:22	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 19:22	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 19:22	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 19:22	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 19:22	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 19:22	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 19:22	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 19:22	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 19:22	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 09:05	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1

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

Sample Description: WS-006(0.5-1.0)082013MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168648
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:30 by HVA

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/21/2013 09:20

Highlands Ranch CO 80129

Reported: 08/28/2013 14:01

20006 SDG#: PEK89-07MS

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	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

Sample Description: WS-006(0.5-1.0)082013MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168649
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:30 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20006 SDG#: PEK89-07MSD

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	35	3.0	5.0	1
02898	Allyl Chloride	107-05-1	4.8	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	5.8	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	5.3	0.1	0.5	1
02898	Bromoform	75-25-2	5.3	0.1	0.5	1
02898	Bromomethane	74-83-9	5.4	0.1	0.5	1
02898	2-Butanone	78-93-3	36	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	5.1	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	5.3	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	5.5	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	6.3	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.5	0.1	0.5	1
02898	Chloroethane	75-00-3	5.0	0.1	0.5	1
02898	Chloroform	67-66-3	5.8	0.1	0.5	1
02898	Chloromethane	74-87-3	4.6	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.3	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.2	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	5.3	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	5.2	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	5.5	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.4	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	4.9	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.3	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	5.6	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	5.6	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	5.5	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	6.0	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.2	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	5.8	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	5.9	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	5.2	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	4.8	0.1	0.5	1
02898	Ethyl ether	60-29-7	4.7	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.4	0.1	0.5	1
02898	Freon 113	76-13-1	6.1	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	6.2	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	5.6	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	5.3	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	5.1	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	23	1.0	5.0	1
02898	Methylene Chloride	75-09-2	5.1	0.2	0.5	1

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

Sample Description: WS-006(0.5-1.0)082013MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168649
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:30 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20006 SDG#: PEK89-07MSD

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	5.1	0.1	0.5	1
02898	Styrene	100-42-5	5.3	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	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	6.5	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	23	2.0	5.0	1
02898	Toluene	108-88-3	5.3	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	4.8	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	5.3	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	6.1	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	5.0	0.1	0.5	1
02898	Trichloroethene	79-01-6	5.8	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	4.9	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	5.2	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	5.2	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	5.2	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	16	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	1.0	0.010	0.051	1
08357	Acenaphthylene	208-96-8	1.2	0.010	0.051	1
08357	Anthracene	120-12-7	0.39	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.80	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.45	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.96	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.82	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.88	0.010	0.051	1
08357	Chrysene	218-01-9	0.95	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	0.87	0.010	0.051	1
08357	Fluoranthene	206-44-0	1.1	0.010	0.051	1
08357	Fluorene	86-73-7	1.1	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.84	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	1.2	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	1.1	0.010	0.051	1
08357	Naphthalene	91-20-3	1.1	0.030	0.051	1
08357	Phenanthrene	85-01-8	1.1	0.030	0.051	1
08357	Pyrene	129-00-0	0.93	0.010	0.051	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	42.4	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.155	0.0068	0.0200	1
07046	Barium	7440-39-3	2.05	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0508	0.00076	0.0050	1
01750	Calcium	7440-70-2	9.47	0.0334	0.200	1

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

Sample Description: WS-006(0.5-1.0)082013MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168649
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:30 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20006 SDG#: PEK89-07MSD

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	0.200	0.0016	0.0150	1
07055	Lead	7439-92-1	0.153	0.0047	0.0150	1
01757	Magnesium	7439-95-4	4.56	0.0167	0.100	1
07061	Nickel	7440-02-0	0.519	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.152	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0457	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.500	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.	24.3	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	G132341AA	08/22/2013 11:49	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 11:49	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/24/2013 12:39	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 19:26	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 19:26	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 19:26	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 19:26	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 19:26	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 19:26	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 19:26	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 19:26	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 19:26	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 19:26	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 19:26	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 09:12	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

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

Sample Description: WS-006(0.5-1.0)082013DUP Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168650
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 10:30 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20006 SDG#: PEK89-07DUP

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	24.4	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	0.0239	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.50	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	2.60	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06256	Total Hardness as CaCO ₃	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 19:18	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 19:18	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 19:18	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 19:18	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 19:18	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 19:18	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 19:18	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 19:18	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 19:18	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 19:18	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 19:18	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 09:03	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

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

Sample Description: WS-005(Surface)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168651
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 11:10 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20005 SDG#: PEK89-08

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)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168651
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 11:10 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20005 SDG#: PEK89-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	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	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	28.1	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0092 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0549	0.00033	0.0050	1

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

Sample Description: WS-005(Surface)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168651
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 11:10 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20005 SDG#: PEK89-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.57	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	2.83	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.	1.5 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	G132341AA	08/22/2013 15:25	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 15:25	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/24/2013 17:04	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 20:06	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 20:06	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 20:06	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 20:06	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 20:06	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 20:06	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 20:06	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 20:06	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 20:06	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 20:06	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 20:06	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 09:14	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1

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

Sample Description: WS-005(Surface)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168651
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 11:10 by HVA

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/21/2013 09:20

Highlands Ranch CO 80129

Reported: 08/28/2013 14:01

20005 SDG#: PEK89-08

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	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

Sample Description: WS-002(Surface)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168652
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 11:30 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20002 SDG#: PEK89-09

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

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

Sample Description: WS-002(Surface)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168652
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 11:30 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20002 SDG#: PEK89-09

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.	0.011	0.057	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.057	1
08357	Anthracene	120-12-7	N.D.	0.011	0.057	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.057	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.057	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.057	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.057	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.057	1
08357	Chrysene	218-01-9	N.D.	0.011	0.057	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.057	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.057	1
08357	Fluorene	86-73-7	N.D.	0.011	0.057	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.057	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.057	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.057	1
08357	Naphthalene	91-20-3	N.D.	0.034	0.057	1
08357	Phenanthrene	85-01-8	N.D.	0.034	0.057	1
08357	Pyrene	129-00-0	N.D.	0.011	0.057	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	35.7	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.0168 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.176	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	8.41	0.0334	0.200	1

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

Sample Description: WS-002 (Surface) 082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168652
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 11:30 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20002 SDG#: PEK89-09

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	0.0036 J	0.0016	0.0150	1
07055	Lead	7439-92-1	0.0062 J	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.56	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0036 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	0.0043 J	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	1.9 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132341AA	08/22/2013 15:46	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 15:46	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/24/2013 17:33	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 20:10	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 20:10	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 20:10	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 20:10	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 20:10	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 20:10	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 20:10	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 20:10	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 20:10	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 20:10	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 20:10	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 09:16	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

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

Sample Description: WS-018(Surface)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168653
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 11:45 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20018 SDG#: PEK89-10

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)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168653
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 11:45 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20018 SDG#: PEK89-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	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	25.8	0.033	0.20	1
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0367	0.00033	0.0050	1

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

Sample Description: WS-018(Surface)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168653
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 11:45 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20018 SDG#: PEK89-10

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	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.77	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	2.78	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	G132341AA	08/22/2013 16:08	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 16:08	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/24/2013 18:03	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 20:14	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 20:14	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 20:14	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 20:14	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 20:14	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 20:14	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 20:14	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 20:14	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 20:14	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 20:14	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 20:14	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 09:18	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1

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

Sample Description: WS-018(Surface)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168653
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 11:45 by HVA

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/21/2013 09:20

Highlands Ranch CO 80129

Reported: 08/28/2013 14:01

20018 SDG#: PEK89-10

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	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

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

Sample Description: WS-011(1.5-2.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168654
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 12:00 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20111 SDG#: PEK89-11

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)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168654
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 12:00 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20111 SDG#: PEK89-11

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	0.051	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	25.1	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.0076 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0257	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.60	0.0334	0.200	1

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

Sample Description: WS-011(1.5-2.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168654
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 12:00 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20111 SDG#: PEK89-11

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	2.69	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	G132341AA	08/22/2013 16:29	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 16:29	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/26/2013 06:10	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 20:18	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 20:18	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 20:18	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 20:18	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 20:18	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 20:18	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 20:18	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 20:18	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 20:18	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 20:18	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 20:18	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 09:20	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

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

Sample Description: WS-011(5.0-5.5)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168655
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 12:10 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20112 SDG#: PEK89-12

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

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

Sample Description: WS-011(5.0-5.5)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168655
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 12:10 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20112 SDG#: PEK89-12

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.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1
The 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	25.7	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	0.0457	0.00033	0.0050	1

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

Sample Description: WS-011(5.0-5.5)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168655
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 12:10 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20112 SDG#: PEK89-12

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	5.70	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	2.80	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	G132341AA	08/22/2013 16:51	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 16:51	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/26/2013 06:39	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 20:22	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 20:22	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 20:22	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 20:22	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 20:22	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 20:22	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 20:22	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 20:22	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 20:22	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 20:22	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 20:22	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 09:22	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1

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

Sample Description: WS-011(5.0-5.5)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168655
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 12:10 by HVA

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/21/2013 09:20

Highlands Ranch CO 80129

Reported: 08/28/2013 14:01

20112 SDG#: PEK89-12

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	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

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

Sample Description: WS-003(Surface)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168656
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 12:30 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20003 SDG#: PEK89-13

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)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168656
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 12:30 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20003 SDG#: PEK89-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.027 J	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.021 J	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.038 J	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.031 J	0.010	0.051	1
08357	Chrysene	218-01-9	0.041 J	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	0.022 J	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.012 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.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	0.044 J	0.010	0.051	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	30.1	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	0.0105 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0917	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.00	0.0334	0.200	1

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

Sample Description: WS-003 (Surface) 082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168656
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 12:30 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20003 SDG#: PEK89-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	0.0023 J	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	0.0031 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	0.0048 J	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132341AA	08/22/2013 17:13	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 17:13	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/26/2013 07:08	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 20:26	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 20:26	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 20:26	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 20:26	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 20:26	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 20:26	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 20:26	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 20:26	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 20:26	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 20:26	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 20:26	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 09:24	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

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

Sample Description: WS-007(0.5-1.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168657
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 12:45 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20007 SDG#: PEK89-14

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

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

Sample Description: WS-007(0.5-1.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168657
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 12:45 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20007 SDG#: PEK89-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.050	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.050	1
08357	Anthracene	120-12-7	N.D.	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.050	1
08357	Benzo(b)fluoranthene	205-99-2	0.019 J	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	0.012 J	0.010	0.050	1
08357	Chrysene	218-01-9	0.019 J	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.050	1
08357	Fluoranthene	206-44-0	0.031 J	0.010	0.050	1
08357	Fluorene	86-73-7	N.D.	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.050	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.050	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.050	1
08357	Pyrene	129-00-0	0.026 J	0.010	0.050	1
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	15.1	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	0.0239	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	3.51	0.0334	0.200	1

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

Sample Description: WS-007(0.5-1.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168657
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 12:45 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20007 SDG#: PEK89-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	1.53	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	2.1 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	G132341AA	08/22/2013 17:35	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 17:35	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/26/2013 07:38	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 20:38	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 20:38	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 20:38	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 20:38	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 20:38	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 20:38	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 20:38	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 20:38	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 20:38	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 20:38	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 20:38	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 09:26	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

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

Sample Description: WS-001(0.5-1.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168658
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 13:00 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20001 SDG#: PEK89-15

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)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168658
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 13:00 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20001 SDG#: PEK89-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
The 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	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	23.8	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0079 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0252	0.00033	0.0050	1

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

Sample Description: WS-001(0.5-1.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168658
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 13:00 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20001 SDG#: PEK89-15

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	5.33	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	2.55	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	G132341AA	08/22/2013 17:56	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 17:56	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/26/2013 08:07	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 05:33	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 20:42	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 20:42	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 20:42	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132331848005	08/25/2013 20:42	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 20:42	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 20:42	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 20:42	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 20:42	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 20:42	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 20:42	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 20:42	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 09:28	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1

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

Sample Description: WS-001(0.5-1.0)082013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168658
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 13:00 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20001 SDG#: PEK89-15

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	13239807903A	08/27/2013 16:59	Michelle L Lalli	1

Sample Description: WS-EB-036-082013 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168659
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 14:00 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20E36 SDG#: PEK89-16EB

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

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

Sample Description: WS-EB-036-082013 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168659
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 14:00 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20E36 SDG#: PEK89-16EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	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	1.8	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0056	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	0.531	0.0334	0.200	1

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

Sample Description: WS-EB-036-082013 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168659
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013 14:00 by HVA

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20E36 SDG#: PEK89-16EB

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	0.111	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	G132341AA	08/22/2013 12:32	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 12:32	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13234WAA026	08/26/2013 08:36	Brian K Graham	1
10470	BNP Water Extraction (SIM)	SW-846 3510C	1	13234WAA026	08/22/2013 16:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132406256001	08/28/2013 10:34	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132331848005	08/25/2013 20:46	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	132331848005	08/25/2013 20:46	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	132331848005	08/25/2013 20:46	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	132381848002	08/27/2013 19:55	John P Hook	1
07051	Chromium	SW-846 6010B	1	132331848005	08/25/2013 20:46	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132331848005	08/25/2013 20:46	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	132331848005	08/25/2013 20:46	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132331848005	08/25/2013 20:46	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	132331848005	08/25/2013 20:46	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	132331848005	08/25/2013 20:46	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132331848005	08/25/2013 20:46	Tara L Snyder	1
00259	Mercury	SW-846 7470A	1	132345713002	08/24/2013 09:30	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132331848005	08/22/2013 11:20	James L Mertz	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	2	132381848002	08/27/2013 11:48	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132345713002	08/23/2013 15:10	Nelli S Markaryan	1

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

Sample Description: WS-TB-128-082013 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168660
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013

ExxonMobil c/o Arcadis

Submitted: 08/21/2013 09:20

630 Plaza Drive, Suite 600

Reported: 08/28/2013 14:01

Highlands Ranch CO 80129

20128 SDG#: PEK89-17TB*

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

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

Sample Description: WS-TB-128-082013 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7168660
LL Group # 1413017
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/20/2013

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

Submitted: 08/21/2013 09:20

Reported: 08/28/2013 14:01

20128 SDG#: PEK89-17TB*

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	G132341AA	08/22/2013 12:54	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G132341AA	08/22/2013 12:54	Jason M Long	1

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 08/28/13 at 02:01 PM

Group Number: 1413017

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: G132341AA	Sample number(s): 7168641-7168649, 7168651-7168660								
Acetone	N.D.	3.0	5.0	ug/l	91		60-139		
Allyl Chloride	N.D.	0.1	0.5	ug/l	89		61-130		
Benzene	N.D.	0.1	0.5	ug/l	97		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	103		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	114		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	101		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	104		73-128		
Bromomethane	N.D.	0.1	0.5	ug/l	101		62-126		
2-Butanone	N.D.	1.0	5.0	ug/l	92		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	89		80-120		
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	93		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	97		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	108		80-129		
Chlorobenzene	N.D.	0.1	0.5	ug/l	104		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	91		68-120		
Chloroform	N.D.	0.1	0.5	ug/l	107		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	84		55-120		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	96		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	96		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	102		64-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	99		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	100		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	105		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	102		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	104		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	103		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	81		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	109		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	96		80-123		
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	102		80-120		
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	104		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	110		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	92		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	102		75-122		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	103		80-121		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	98		80-123		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	92		80-120		
Ethyl ether	N.D.	0.1	0.5	ug/l	95		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	98		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	100		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	105		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: 1413017

Reported: 08/28/13 at 02:01 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Isopropylbenzene	N.D.	0.1	0.5	ug/l	102		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	94		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	101		80-120		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	93		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	97		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	91		80-120		
Styrene	N.D.	0.1	0.5	ug/l	100		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	102		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	86		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	115		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	92		65-131		
Toluene	N.D.	0.1	0.5	ug/l	97		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	89		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	98		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	108		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	95		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	106		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	113		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	96		80-120		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	95		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	92		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	101		80-120		

Batch number: 13234WAA026

Sample number(s): 7168641-7168649, 7168651-7168659

Acenaphthene	N.D.	0.010	0.050	ug/l	105		77-118		
Acenaphthylene	N.D.	0.010	0.050	ug/l	114		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	92		73-127		
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	98		72-120		
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	105		79-136		
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	95		64-130		
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	104		73-131		
Chrysene	N.D.	0.010	0.050	ug/l	103		76-125		
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	84		58-131		
Fluoranthene	N.D.	0.010	0.050	ug/l	111		79-124		
Fluorene	N.D.	0.010	0.050	ug/l	103		74-115		
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	93		62-130		
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	114		80-126		
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	112		81-124		
Naphthalene	N.D.	0.030	0.050	ug/l	109		75-120		
Phenanthrene	N.D.	0.030	0.050	ug/l	103		75-120		
Pyrene	N.D.	0.010	0.050	ug/l	102		71-130		

Batch number: 132331848005

Sample number(s): 7168641-7168659

Arsenic	N.D.	0.0068	0.0200	mg/l	103		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	101		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	102		90-112		
Calcium	0.136 J	0.0334	0.200	mg/l	101		90-110		
Chromium	N.D.	0.0016	0.0150	mg/l	100		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	104		88-110		
Magnesium	N.D.	0.0167	0.100	mg/l	99		90-110		
Nickel	N.D.	0.0015	0.0100	mg/l	104		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	100		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	91		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	100		90-110		

*- Outside of specification

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

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1413017

Reported: 08/28/13 at 02:01 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 132345713002	Sample number(s): 7168641-7168659								
Mercury	N.D.	0.00006	0.00020	mg/l	96		80-120		
		0							
Batch number: 132381848002	Sample number(s): 7168659								
Calcium	N.D.	0.0334	0.200	mg/l	98		90-110		
Batch number: 13239807903A	Sample number(s): 7168641-7168658								
HEM (oil & grease)	N.D.	1.4	5.0	mg/l	109	99	78-114	9	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: G132341AA	Sample number(s): 7168641-7168649, 7168651-7168660 UNSPK: 7168647								
Acetone	94	94	57-163	0	30				
Allyl Chloride	97	96	56-160	1	30				
Benzene	106	107	87-126	1	30				
Bromobenzene	106	108	80-123	2	30				
Bromochloromethane	112	116	82-125	4	30				
Bromodichloromethane	105	106	82-133	1	30				
Bromoform	105	106	60-138	1	30				
Bromomethane	108	108	66-130	1	30				
2-Butanone	99	96	56-160	3	30				
n-Butylbenzene	99	102	83-131	3	30				
sec-Butylbenzene	103	106	84-128	2	30				
tert-Butylbenzene	105	111	84-135	5	30				
Carbon Tetrachloride	124	126	81-148	2	30				
Chlorobenzene	110	110	78-133	0	30				
Chloroethane	101	101	70-139	0	30				
Chloroform	113	115	86-136	2	30				
Chloromethane	92	92	49-135	0	30				
2-Chlorotoluene	102	106	75-134	4	30				
4-Chlorotoluene	100	104	76-134	4	30				
1,2-Dibromo-3-chloropropane	113	107	43-143	6	30				
Dibromochloromethane	102	104	79-125	2	30				
1,2-Dibromoethane	101	100	84-127	0	30				
Dibromomethane	104	105	83-126	1	30				
1,2-Dichlorobenzene	105	108	83-117	2	30				
1,3-Dichlorobenzene	108	111	79-132	3	30				
1,4-Dichlorobenzene	107	108	79-120	1	30				
Dichlorodifluoromethane	96	97	28-136	1	30				
1,1-Dichloroethane	107	105	88-136	2	30				
1,2-Dichloroethane	112	112	82-135	0	30				
1,1-Dichloroethene	112	112	83-150	0	30				
cis-1,2-Dichloroethene	108	109	82-129	1	30				
trans-1,2-Dichloroethene	113	114	88-127	1	30				
Dichlorofluoromethane	119	120	81-161	1	30				
1,2-Dichloropropane	102	104	91-126	2	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: 1413017

Reported: 08/28/13 at 02:01 PM

Sample Matrix Quality Control

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

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
1,3-Dichloropropane	94	94	80-127	0	30				
2,2-Dichloropropane	115	116	80-134	1	30				
1,1-Dichloropropene	117	118	86-139	1	30				
cis-1,3-Dichloropropene	102	104	74-132	2	30				
trans-1,3-Dichloropropene	96	95	71-128	1	30				
Ethyl ether	93	94	57-139	1	30				
Ethylbenzene	108	107	80-140	0	30				
Freon 113	122	122	77-147	0	30				
Hexachlorobutadiene	120	124	65-128	4	30				
Isopropylbenzene	112	112	81-133	0	30				
p-Isopropyltoluene	103	106	84-124	2	30				
Methyl Tertiary Butyl Ether	101	102	82-132	1	30				
4-Methyl-2-Pentanone	91	91	69-149	0	30				
Methylene Chloride	102	102	77-135	1	30				
n-Propylbenzene	100	102	79-131	2	30				
Styrene	106	105	63-151	1	30				
1,1,1,2-Tetrachloroethane	107	108	87-126	1	30				
1,1,2,2-Tetrachloroethane	84	88	75-131	4	30				
Tetrachloroethene	128	129	75-129	1	30				
Tetrahydrofuran	98	93	56-154	5	30				
Toluene	105	105	83-127	0	30				
1,2,3-Trichlorobenzene	90	96	73-125	6	30				
1,2,4-Trichlorobenzene	101	106	77-120	5	30				
1,1,1-Trichloroethane	121	121	85-140	0	30				
1,1,2-Trichloroethane	97	100	85-129	3	30				
Trichloroethene	118	117	85-131	1	30				
Trichlorofluoromethane	132	133	73-139	1	30				
1,2,3-Trichloropropane	93	98	76-120	5	30				
1,2,4-Trimethylbenzene	102	105	87-126	3	30				
1,3,5-Trimethylbenzene	102	104	89-129	2	30				
Vinyl Chloride	104	104	62-135	0	30				
Xylene (Total)	109	110	81-137	0	30				

Batch number: 13234WAA026

Sample number(s): 7168641-7168649,7168651-7168659 UNSPK: 7168647

Acenaphthene	95	100	47-136	3	30
Acenaphthylene	112	117	33-146	3	30
Anthracene	32*	38*	69-119	16	30
Benzo(a)anthracene	75	79	37-150	3	30
Benzo(a)pyrene	40*	45*	64-123	10	30
Benzo(b)fluoranthene	87	95	33-152	7	30
Benzo(g,h,i)perylene	74	80	36-138	6	30
Benzo(k)fluoranthene	82	87	31-142	4	30
Chrysene	91	94	34-135	1	30
Dibenz(a,h)anthracene	79	85	17-134	6	30
Fluoranthene	100	109	39-147	7	30
Fluorene	104	107	38-149	1	30
Indeno(1,2,3-cd)pyrene	78	83	29-143	4	30
1-Methylnaphthalene	114	116	49-152	1	30
2-Methylnaphthalene	113	113	51-146	3	30
Naphthalene	110	109	58-131	2	30
Phenanthrene	105	106	48-140	1	30
Pyrene	90	92	59-125	1	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 SummaryClient Name: ExxonMobil c/o Arcadis
Reported: 08/28/13 at 02:01 PM

Group Number: 1413017

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup</u> <u>RPD</u> <u>Max</u>
Batch number: 132331848005	Sample number(s): 7168641-7168659 UNSPK: 7168647 BKG: 7168647								
Arsenic	98	98	81-123	0	20	0.0080 J	N.D.	200* (1)	20
Barium	100	101	78-118	1	20	0.0235	0.0239	2 (1)	20
Cadmium	102	102	83-116	0	20	N.D.	N.D.	0 (1)	20
Calcium	100	100	81-118	0	20	5.47	5.50	1	20
Chromium	100	100	81-120	0	20	N.D.	N.D.	0 (1)	20
Lead	103	102	75-125	1	20	N.D.	N.D.	0 (1)	20
Magnesium	100	100	75-125	0	20	2.57	2.60	1	20
Nickel	103	104	86-115	1	20	N.D.	N.D.	0 (1)	20
Selenium	99	101	75-125	3	20	N.D.	N.D.	0 (1)	20
Silver	92	91	75-125	1	20	N.D.	N.D.	0 (1)	20
Vanadium	100	100	90-111	0	20	N.D.	N.D.	0 (1)	20
Batch number: 132345713002	Sample number(s): 7168641-7168659 UNSPK: 7168647 BKG: 7168647								
Mercury	97	100	80-120	3	20	N.D.	N.D.	0 (1)	20
Batch number: 132381848002	Sample number(s): 7168659 UNSPK: P174862 BKG: P174862								
Calcium	98	98	81-118	0	20	3.96	3.91	1	20
Batch number: 13239807903A	Sample number(s): 7168641-7168658 UNSPK: 7168647 BKG: 7168647								
HEM (oil & grease)	45*	58*	78-114	25	29	N.D.	N.D.	0 (1)	18

Surrogate Quality ControlSurrogate 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: G132341AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7168641	105	101	96	94
7168642	105	104	96	94
7168643	105	100	97	96
7168644	105	99	97	94
7168645	106	101	97	94
7168646	105	100	97	94
7168647	105	104	97	96
7168648	106	99	98	96
7168649	106	103	97	95
7168651	104	100	97	95
7168652	106	101	97	95
7168653	105	102	97	96
7168654	105	101	96	94
7168655	105	101	97	94
7168656	106	102	96	95
7168657	106	101	97	95
7168658	106	101	97	96

*- Outside of specification

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Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1413017

Reported: 08/28/13 at 02:01 PM

Surrogate Quality Control

7168659	106	102	97	95
7168660	106	101	97	95
Blank	106	103	97	95
LCS	106	103	98	95
MS	106	99	98	96
MSD	106	103	97	95

Limits:	77-114	74-113	77-110	78-110
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Analysis Name: PAHs in waters by SIM

Batch number: 13234WAA026

Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
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7168641	96	79	108
7168642	93	65	110
7168643	95	69	106
7168644	93	67	106
7168645	94	71	106
7168646	96	59*	111
7168647	92	67	105
7168648	96	60*	111
7168649	98	69	111
7168651	94	58*	106
7168652	93	76	108
7168653	94	60*	106
7168654	83	63	93
7168655	82	47*	92
7168656	80	64	90
7168657	77	80	94
7168658	81	52*	93
7168659	82	81	92
Blank	90	96	104
LCS	96	94	110
MS	96	60*	111
MSD	98	69	111

Limits:	44-137	62-141	51-136
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*- Outside of specification

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

ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only

Group # 143017 Sample # 7168641-60

Instructions on reverse side correspond with circled numbers.

PS-10F2

1 Client Information				4 Matrix				5 Analyses Requested												6 Remarks																											
Facility #/SID <u>Mayflower Pipeline Incident</u>				☐ Sediment ☐ Potable ☐ Ground ☒ Surface ☐ NPDES ☐ Air ☐ Oil				Preservation Code												Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other																											
Site Address <u>Mayflower, AR</u>								<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>H</td><td>N</td><td>H</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>														H	N	H																							
H	N	H																																													
ExxonMobil PM <u>Scott Bushroe</u>								Total # of Containers <u>VOCS 8260B</u> <u>PAH 8270 SIM</u> <u>hardness</u> <u>PCRAMetals + Ni, V, Co, Mn</u> <u>Diss. Metals</u> <u>HEM Oil & Grease</u>												Lab to Filter & preserve Diss. Metals upon receipt																											
Consultant/Office <u>Arcadis</u>																																															
Consultant PM <u>Steve Barrick</u>				Consultant Phone # <u>919-302-6799</u>																																											
Sampler <u>H. Van Allen / T. Milburn</u>																																															
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Oil	Total # of Containers																																						
Date	Time																																														
WS-014(1.5-2.0)082013	8/20/13	900	✓				✓		9	✓	✓	✓	✓	✓																																	
WS-014(5.5-6.0)082013		910	✓				✓		9	✓	✓	✓	✓	✓																																	
WS-012(1.5-2.0)082013		930	✓				✓		9	✓	✓	✓	✓	✓																																	
WS-012(5.0-5.5)082013		940	✓				✓		9	✓	✓	✓	✓	✓																																	
WS-010(1.5-2.0)082013		1000	✓				✓		9	✓	✓	✓	✓	✓																																	
WS-010(3.5-4.0)082013		1010	✓				✓		9	✓	✓	✓	✓	✓																																	
WS-006(0.5-1.0)082013		1030	✓				✓		9	✓	✓	✓	✓	✓																																	
WS-005(Surface)082013		1110	✓				✓		9	✓	✓	✓	✓	✓																																	
WS-006(0.5-1.0)082013		1030	✓				✓		18	✓	✓	✓	✓	✓			MS/MSD																														
WS-002(Surface)082013		1130	✓				✓		9	✓	✓	✓	✓	✓																																	
WS-018(Surface)082013		1145	✓				✓		9	✓	✓	✓	✓	✓																																	
WS-011(1.5-2.0)082013		1200	✓				✓		9	✓	✓	✓	✓	✓																																	

7 Turnaround Time Requested (TAT) (please circle)			Relinquished by		Date	Time	Received by		Date	Time
Standard	<u>5 day</u>	4 day	<u>[Signature]</u>		<u>8/20/13</u>	<u>1500</u>	<u>[Signature]</u>			
72 hour	48 hour	24 hour								
			Relinquished by		Date	Time	Received by		Date	Time
			Relinquished by		Date	Time	Received by		Date	Time
			Relinquished by Commercial Carrier				Received by		Date	Time
			UPS ☒ FedEx ☐ Other ☐				<u>[Signature]</u>		<u>8/21/13</u>	<u>0920</u>
			Temperature Upon Receipt <u>03-4.3</u> °C				Custody Seals Intact? <u>Yes</u> No			

8 Data Package (circle if required)		EDD (circle if required)	
Type I - Full		Locus EIM (default)	
Type VI (Raw Data)		Other	
NJ Reduced			
Other			

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 # 1413017 Sample # 7168641-60
Instructions on reverse side correspond with circled numbers.

SCR#: ps. 2 of 2

Preservation Codes	
H = HCl	T = Thiosulfate
N = HNO_3	B = NaOH
S = H_2SO_4	O = Other

6	Remarks
	Lab to filter & preserve Diss. Metals upon receipt

Environmental Sample Administration 1413017
Receipt Documentation LogClient/Project: Mayflower WaterShipping Container Sealed: YES NODate of Receipt: 8/21/13Custody Seal Present *: YES NOTime of Receipt: 0920

* 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	DT146	4.3	TB	WI	Y	B	
2		1.3					
3		0.3					
4		2.2					
5		3.9					
6		0.8					

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

Paperwork Discrepancy/Unpacking Problems:

Gr. 141 2689 Received WS-002 (surface) 081913 8/19/13 @ 1030 - 15 bottle
Gr. 141 2681 Received WS-003 (surface) 081913 8/19/13 @ 1130 - 08 bottle

Unpacker Signature/Emp#: Cash 3647 Date/Time: 8/21/13 1045

Issued by Dept. 6042 Management

Environmental Sample Administration
Receipt Documentation Log

1413017

Client/Project: Mayflower WaterShipping Container Sealed: YES NODate of Receipt: 8/21/13Custody Seal Present *: YES NOTime of Receipt: 0920* Custody seal was intact unless otherwise noted in the
discrepancy sectionSource Code: 60-1Package: Chilled Not Chilled

Temperature of Shipping Containers

Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT146	0.3	TB	WI	Y	B	
2							
3							
4							
5							
6							

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: CEH 3647 Date/Time: 8/21/13 1045

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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