

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 27, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 08/20/2013

Group Number: 1412650

SDG: PEK84

PO Number: B0086003.1301

State of Sample Origin: AR

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
WS-TB-126-081813 Water	7167139
WS-014(1.5-2.0)081813 Grab Surface Water	7167140
WS-014(5.5-6.0)081813 Grab Surface Water	7167141
WS-012(1.5-2.0)081813 Grab Surface Water	7167142
WS-012(5.0-5.5)081813 Grab Surface Water	7167143
WS-010(1.5-2.0)081813 Grab Surface Water	7167144
WS-010(3.5-4.0)081813 Grab Surface Water	7167145
WS-006(0.5-1.0)081813 Grab Surface Water	7167146
WS-006(0.5-1.0)081813MS Grab Surface Water	7167147
WS-006(0.5-1.0)081813MSD Grab Surface Water	7167148
WS-006(0.5-1.0)081813DUP Grab Surface Water	7167149
WS-005(Surface)081813 Grab Surface Water	7167150
WS-002(Surface)081813 Grab Surface Water	7167151
WS-018(Surface)081813 Grab Surface Water	7167152
WS-011(1.5-2.0)081813 Grab Surface Water	7167153
WS-011(5.0-5.5)081813 Grab Surface Water	7167154
WS-003(Surface)081813 Grab Surface Water	7167155
WS-007(0.5-1.0)081813 Grab Surface Water	7167156
WS-001(0.5-1.0)081813 Grab Surface Water	7167157
WS-EB-034-081813 Grab Water	7167158

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

ELECTRONIC COPY TO
ARCADIS

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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 #: 1412650

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 8260B 25mL purge, GC/MS Volatiles**

Batch #: I132322AA (Sample number(s): 7167139-7167148, 7167150-7167158 UNSPK: 7167146)

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

SW-846 8270C SIM, GC/MS Semivolatiles

Batch #: 13232WAK026 (Sample number(s): 7167140-7167148, 7167150-7167158 UNSPK: 7167146)

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) 7167153, 7167155

Sample #s: 7167153, 7167155

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 #: 132321848004 (Sample number(s): 7167140-7167158 UNSPK: 7167146 BKG: 7167146)

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

EPA 1664A, Wet Chemistry

Batch #: 13238807903A (Sample number(s): 7167140-7167157 UNSPK: 7167146 BKG:
7167146)

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

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

Sample Description: **WS-TB-126-081813 Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167139**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

T-126 SDG#: PEK84-01TB

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-126-081813 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7167139
LL Group # 1412650
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/18/2013

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

T-126 SDG#: PEK84-01TB

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	0.1 J	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	I132322AA	08/20/2013 19:37	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/20/2013 19:37	Kevin A Sposito	1

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

Sample Description: WS-014(1.5-2.0)081813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7167140
LL Group # 1412650
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/18/2013 08:35 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18141 SDG#: PEK84-02

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

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

Sample Description: **WS-014(1.5-2.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167140**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 08:35 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18141 SDG#: PEK84-02

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	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles SW-846 8270C SIM						
			ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.054	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.054	1
08357	Anthracene	120-12-7	N.D.	0.011	0.054	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.054	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.054	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.054	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.054	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.054	1
08357	Chrysene	218-01-9	N.D.	0.011	0.054	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.054	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.054	1
08357	Fluorene	86-73-7	N.D.	0.011	0.054	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.054	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.054	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.054	1
08357	Naphthalene	91-20-3	N.D.	0.033	0.054	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.054	1
08357	Pyrene	129-00-0	N.D.	0.011	0.054	1
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	27.7	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	0.0397	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.30	0.0334	0.200	1

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

Sample Description: **WS-014(1.5-2.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167140**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 08:35 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18141 SDG#: PEK84-02

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	2.91	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	I132322AA	08/20/2013 20:19	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/20/2013 20:19	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13232WAK026	08/23/2013 21:33	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13232WAK026	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 22:05	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 22:05	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 22:05	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 22:05	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 22:05	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 22:05	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 22:05	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 22:05	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 22:05	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 22:05	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 22:05	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 09:55	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: **WS-014(5.5-6.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167141**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 08:40 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18142 SDG#: PEK84-03

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

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

Sample Description: **WS-014(5.5-6.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167141**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 08:40 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18142 SDG#: PEK84-03

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	
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
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	27.0	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0398	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.14	0.0334	0.200	1

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

Sample Description: **WS-014(5.5-6.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167141**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 08:40 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18142 SDG#: PEK84-03

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	2.84	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	1.4 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132322AA	08/20/2013 20:40	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/20/2013 20:40	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13232WAK026	08/23/2013 22:02	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13232WAK026	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 22:09	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 22:09	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 22:09	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 22:09	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 22:09	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 22:09	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 22:09	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 22:09	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 22:09	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 22:09	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 22:09	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 09:57	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: **WS-012(1.5-2.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167142**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:05 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18121 SDG#: PEK84-04

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(1.5-2.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167142**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:05 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18121 SDG#: PEK84-04

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	
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	26.6	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0371	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.06	0.0334	0.200	1

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

Sample Description: **WS-012(1.5-2.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167142**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:05 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18121 SDG#: PEK84-04

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	2.79	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	I132322AA	08/20/2013 21:01	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/20/2013 21:01	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13232WAK026	08/23/2013 22:31	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13232WAK026	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 22:20	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 22:20	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 22:20	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 22:20	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 22:20	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 22:20	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 22:20	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 22:20	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 22:20	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 22:20	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 22:20	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 09:59	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: **WS-012(5.0-5.5)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167143**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:10 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18122 SDG#: PEK84-05

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

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

Sample Description: **WS-012(5.0-5.5)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167143**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:10 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18122 SDG#: PEK84-05

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	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles SW-846 8270C SIM						
			ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.054	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.054	1
08357	Anthracene	120-12-7	N.D.	0.011	0.054	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.054	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.054	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.054	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.054	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.054	1
08357	Chrysene	218-01-9	N.D.	0.011	0.054	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.054	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.054	1
08357	Fluorene	86-73-7	N.D.	0.011	0.054	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.054	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.054	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.054	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.054	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.054	1
08357	Pyrene	129-00-0	N.D.	0.011	0.054	1
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	26.2	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0388	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.96	0.0334	0.200	1

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

Sample Description: **WS-012(5.0-5.5)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167143**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:10 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18122 SDG#: PEK84-05

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	2.74	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	I132322AA	08/20/2013 21:22	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/20/2013 21:22	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13232WAK026	08/23/2013 23:01	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13232WAK026	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 22:24	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 22:24	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 22:24	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 22:24	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 22:24	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 22:24	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 22:24	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 22:24	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 22:24	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 22:24	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 22:24	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 10:01	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: **WS-010(1.5-2.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167144**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:30 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18101 SDG#: PEK84-06

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

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

Sample Description: **WS-010(1.5-2.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167144**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:30 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18101 SDG#: PEK84-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B 25mL						
			ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles SW-846 8270C SIM						
			ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	25.6	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0340	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.80	0.0334	0.200	1

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

Sample Description: **WS-010(1.5-2.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167144**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:30 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18101 SDG#: PEK84-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.70	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.	2.6 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132322AA	08/20/2013 21:43	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/20/2013 21:43	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13232WAK026	08/23/2013 23:30	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13232WAK026	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 22:28	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 22:28	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 22:28	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 22:28	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 22:28	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 22:28	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 22:28	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 22:28	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 22:28	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 22:28	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 22:28	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 10:04	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: **WS-010(3.5-4.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167145**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:35 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18102 SDG#: PEK84-07

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

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

Sample Description: **WS-010(3.5-4.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167145**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:35 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18102 SDG#: PEK84-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B 25mL						
			ug/l	ug/l	ug/l	
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
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	24.8	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	0.0335	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.61	0.0334	0.200	1

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

Sample Description: **WS-010(3.5-4.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167145**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:35 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18102 SDG#: PEK84-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.61	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	I132322AA	08/20/2013 22:04	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/20/2013 22:04	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13232WAK026	08/24/2013 00:00	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13232WAK026	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 22:32	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 22:32	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 22:32	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 22:32	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 22:32	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 22:32	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 22:32	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 22:32	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 22:32	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 22:32	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 22:32	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 10:06	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: **WS-006(0.5-1.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167146**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:45 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18006 SDG#: PEK84-08BKG

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)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167146**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:45 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18006 SDG#: PEK84-08BKG

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	
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	26.2	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0354	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.92	0.0334	0.200	1

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

Sample Description: **WS-006(0.5-1.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167146**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:45 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18006 SDG#: PEK84-08BKG

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	0.0017 J	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.77	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	I132322AA	08/20/2013 22:25	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/20/2013 22:25	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13232WAK026	08/23/2013 20:04	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13232WAK026	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 21:42	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 21:42	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 21:42	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 21:42	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 21:42	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 21:42	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 21:42	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 21:42	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 21:42	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 21:42	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 21:42	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 10:08	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: **WS-006(0.5-1.0)081813MS Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167147**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:45 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18006 SDG#: PEK84-08MS

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	49	3.0	5.0	1
02898	Allyl Chloride	107-05-1	4.7	0.1	0.5	1
02898	Benzene	71-43-2	5.5	0.1	0.5	1
02898	Bromobenzene	108-86-1	4.7	0.1	0.5	1
02898	Bromochloromethane	74-97-5	4.7	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	4.8	0.1	0.5	1
02898	Bromoform	75-25-2	4.2	0.1	0.5	1
02898	Bromomethane	74-83-9	3.9	0.1	0.5	1
02898	2-Butanone	78-93-3	50	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	5.9	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	5.7	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	5.2	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	5.1	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.4	0.1	0.5	1
02898	Chloroethane	75-00-3	4.0	0.1	0.5	1
02898	Chloroform	67-66-3	5.3	0.1	0.5	1
02898	Chloromethane	74-87-3	4.2	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.3	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.4	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	5.2	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	4.6	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	5.0	0.1	0.5	1
02898	Dibromomethane	74-95-3	4.8	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	5.2	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.2	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	4.1	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.4	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	4.9	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	5.4	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	5.1	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	5.4	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	4.7	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.7	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	5.3	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	4.6	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	5.6	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	4.5	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	4.7	0.1	0.5	1
02898	Ethyl ether	60-29-7	5.0	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.5	0.1	0.5	1
02898	Freon 113	76-13-1	5.4	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	4.4	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	5.4	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	4.1	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	25	1.0	5.0	1
02898	Methylene Chloride	75-09-2	5.4	0.2	0.5	1

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

Sample Description: **WS-006 (0.5-1.0) 081813MS Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167147**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:45 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18006 SDG#: PEK84-08MS

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	5.9	0.1	0.5	1
02898	Styrene	100-42-5	5.2	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	5.1	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	5.7	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	4.7	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	31	2.0	5.0	1
02898	Toluene	108-88-3	5.5	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	4.6	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	4.5	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	4.8	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	5.3	0.1	0.5	1
02898	Trichloroethene	79-01-6	5.4	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	5.0	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	5.4	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	5.5	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	5.5	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	4.2	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	0.97	0.010	0.051	1
08357	Acenaphthylene	208-96-8	1.1	0.010	0.051	1
08357	Anthracene	120-12-7	0.41	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.86	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.56	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.85	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.79	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.79	0.010	0.051	1
08357	Chrysene	218-01-9	0.88	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	0.82	0.010	0.051	1
08357	Fluoranthene	206-44-0	1.1	0.010	0.051	1
08357	Fluorene	86-73-7	1.0	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.77	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	1.1	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	1.1	0.010	0.051	1
08357	Naphthalene	91-20-3	1.0	0.030	0.051	1
08357	Phenanthrene	85-01-8	1.0	0.030	0.051	1
08357	Pyrene	129-00-0	0.89	0.010	0.051	1
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	42.9	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.153	0.0068	0.0200	1
07046	Barium	7440-39-3	2.06	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0514	0.00076	0.0050	1
01750	Calcium	7440-70-2	9.61	0.0334	0.200	1

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

Sample Description: **WS-006 (0.5-1.0) 081813MS Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167147**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:45 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18006 SDG#: PEK84-08MS

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	0.201	0.0016	0.0150	1
07055	Lead	7439-92-1	0.158	0.0047	0.0150	1
01757	Magnesium	7439-95-4	4.59	0.0167	0.100	1
07061	Nickel	7440-02-0	0.526	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.151	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0487	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	0.00096	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	I132322AA	08/20/2013 22:47	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/20/2013 22:47	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13232WAK026	08/23/2013 20:33	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13232WAK026	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 21:54	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 21:54	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 21:54	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 21:54	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 21:54	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 21:54	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 21:54	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 21:54	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 21:54	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 21:54	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 21:54	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 10:12	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: WS-006(0.5-1.0)081813MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7167148
LL Group # 1412650
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/18/2013 09:45 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18006 SDG#: PEK84-08MSD

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	46	3.0	5.0	1
02898	Allyl Chloride	107-05-1	4.6	0.1	0.5	1
02898	Benzene	71-43-2	5.3	0.1	0.5	1
02898	Bromobenzene	108-86-1	4.6	0.1	0.5	1
02898	Bromochloromethane	74-97-5	4.6	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	4.6	0.1	0.5	1
02898	Bromoform	75-25-2	4.1	0.1	0.5	1
02898	Bromomethane	74-83-9	3.9	0.1	0.5	1
02898	2-Butanone	78-93-3	47	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	5.6	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	5.5	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	5.0	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	4.9	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.3	0.1	0.5	1
02898	Chloroethane	75-00-3	4.0	0.1	0.5	1
02898	Chloroform	67-66-3	5.1	0.1	0.5	1
02898	Chloromethane	74-87-3	4.2	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.1	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.1	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	4.9	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	4.5	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	4.9	0.1	0.5	1
02898	Dibromomethane	74-95-3	4.6	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.1	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.0	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.0	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	4.1	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.2	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	4.7	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	5.2	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	4.9	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	5.3	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	4.5	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.5	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	5.2	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	4.5	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	5.4	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	4.4	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	4.6	0.1	0.5	1
02898	Ethyl ether	60-29-7	5.0	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.3	0.1	0.5	1
02898	Freon 113	76-13-1	5.1	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	4.2	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	5.1	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	5.1	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	4.1	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	24	1.0	5.0	1
02898	Methylene Chloride	75-09-2	5.2	0.2	0.5	1

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

Sample Description: WS-006 (0.5-1.0) 081813MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7167148
LL Group # 1412650
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/18/2013 09:45 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18006 SDG#: PEK84-08MSD

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	
02898	n-Propylbenzene	103-65-1	5.6	0.1	0.5	1
02898	Styrene	100-42-5	5.0	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	4.9	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	5.5	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	4.6	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	29	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	4.4	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	4.3	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	4.7	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	5.2	0.1	0.5	1
02898	Trichloroethene	79-01-6	5.2	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	5.0	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	5.1	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	5.3	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	5.3	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	4.2	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	15	0.1	0.5	1
GC/MS Semivolatiles SW-846 8270C SIM						
			ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	0.97	0.010	0.051	1
08357	Acenaphthylene	208-96-8	1.2	0.010	0.051	1
08357	Anthracene	120-12-7	0.37	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.82	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.53	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.80	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.74	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.74	0.010	0.051	1
08357	Chrysene	218-01-9	0.83	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	0.77	0.010	0.051	1
08357	Fluoranthene	206-44-0	1.1	0.010	0.051	1
08357	Fluorene	86-73-7	1.0	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.71	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	1.1	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	1.1	0.010	0.051	1
08357	Naphthalene	91-20-3	1.0	0.031	0.051	1
08357	Phenanthrene	85-01-8	1.1	0.031	0.051	1
08357	Pyrene	129-00-0	0.84	0.010	0.051	1
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	43.7	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.157	0.0068	0.0200	1
07046	Barium	7440-39-3	2.08	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0516	0.00076	0.0050	1
01750	Calcium	7440-70-2	9.78	0.0334	0.200	1

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

Sample Description: **WS-006 (0.5-1.0) 081813MSD Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167148**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 09:45 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18006 SDG#: PEK84-08MSD

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	0.203	0.0016	0.0150	1
07055	Lead	7439-92-1	0.160	0.0047	0.0150	1
01757	Magnesium	7439-95-4	4.68	0.0167	0.100	1
07061	Nickel	7440-02-0	0.531	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.149	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0492	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.508	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.00095	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	27.6	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132322AA	08/20/2013 23:08	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/20/2013 23:08	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13232WAK026	08/23/2013 21:03	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13232WAK026	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 21:58	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 21:58	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 21:58	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 21:58	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 21:58	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 21:58	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 21:58	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 21:58	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 21:58	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 21:58	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 21:58	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 10:18	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: WS-006 (0.5-1.0) 081813DUP Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7167149
LL Group # 1412650
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/18/2013 09:45 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18006 SDG#: PEK84-08DUP

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 CaCO3	471-34-1	26.1	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	0.0353	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.92	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	2.76	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 CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 21:50	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 21:50	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 21:50	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 21:50	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 21:50	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 21:50	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 21:50	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 21:50	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 21:50	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 21:50	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 21:50	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 10:10	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: **WS-005 (Surface) 081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167150**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 10:20 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18005 SDG#: PEK84-09

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

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

Sample Description: WS-005 (Surface) 081813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7167150
LL Group # 1412650
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/18/2013 10:20 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18005 SDG#: PEK84-09

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 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						
08357	Acenaphthene	83-32-9	N.D.	0.011	0.056	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.056	1
08357	Anthracene	120-12-7	N.D.	0.011	0.056	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.056	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.056	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.056	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.056	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.056	1
08357	Chrysene	218-01-9	N.D.	0.011	0.056	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.056	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.056	1
08357	Fluorene	86-73-7	N.D.	0.011	0.056	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.056	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.056	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.056	1
08357	Naphthalene	91-20-3	N.D.	0.033	0.056	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.056	1
08357	Pyrene	129-00-0	N.D.	0.011	0.056	1
Metals SM 2340 B-1997						
06256	Total Hardness as CaCO3	471-34-1	25.2	0.033	0.20	1
SW-846 6010B						
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0264	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.83	0.0334	0.200	1

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

Sample Description: **WS-005 (Surface) 081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167150**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 10:20 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18005 SDG#: PEK84-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.59	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	I132322AA	08/20/2013 23:29	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/20/2013 23:29	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13232WAK026	08/24/2013 00:29	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13232WAK026	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 22:36	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 22:36	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 22:36	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 22:36	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 22:36	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 22:36	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 22:36	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 22:36	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 22:36	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 22:36	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 22:36	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 10:20	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: WS-002 (Surface) 081813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7167151
LL Group # 1412650
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/18/2013 10:45 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18002 SDG#: PEK84-10

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-002 (Surface) 081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167151**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 10:45 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18002 SDG#: PEK84-10

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 purge						
			ug/l	ug/l	ug/l	
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	0.025 J	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	0.018 J	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	0.013 J	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	0.019 J	0.010	0.051	1
08357	Naphthalene	91-20-3	0.034 J	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	1.0	0.010	0.051	1
Metals SM 2340 B-1997						
			mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	26.8	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	0.0386	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.11	0.0334	0.200	1

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

Sample Description: **WS-002 (Surface) 081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167151**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 10:45 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18002 SDG#: PEK84-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	0.0016 J	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.79	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	I132322AA	08/20/2013 23:50	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/20/2013 23:50	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13232WAK026	08/24/2013 00:58	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13232WAK026	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 22:40	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 22:40	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 22:40	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 22:40	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 22:40	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 22:40	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 22:40	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 22:40	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 22:40	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 22:40	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 22:40	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 10:22	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: **WS-018 (Surface) 081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167152**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 11:05 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18018 SDG#: PEK84-11

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-018 (Surface) 081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167152**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 11:05 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18018 SDG#: PEK84-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B 25mL purge						
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						
08357	Acenaphthene	83-32-9	N.D.	0.011	0.054	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.054	1
08357	Anthracene	120-12-7	N.D.	0.011	0.054	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.054	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.054	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.054	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.054	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.054	1
08357	Chrysene	218-01-9	N.D.	0.011	0.054	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.054	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.054	1
08357	Fluorene	86-73-7	N.D.	0.011	0.054	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.054	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.054	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.054	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.054	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.054	1
08357	Pyrene	129-00-0	N.D.	0.011	0.054	1
Metals SM 2340 B-1997						
06256	Total Hardness as CaCO3	471-34-1	27.4	0.033	0.20	1
SW-846 6010B						
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0391	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.19	0.0334	0.200	1

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

Sample Description: **WS-018 (Surface) 081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167152**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 11:05 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18018 SDG#: PEK84-11

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	2.90	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	I132322AA	08/21/2013 00:11	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/21/2013 00:11	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13232WAK026	08/24/2013 01:28	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13232WAK026	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 22:43	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 22:43	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 22:43	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 22:43	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 22:43	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 22:43	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 22:43	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 22:43	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 22:43	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 22:43	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 22:43	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 10:24	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: WS-011(1.5-2.0)081813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7167153
LL Group # 1412650
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/18/2013 11:25 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18111 SDG#: PEK84-12

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

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

Sample Description: **WS-011(1.5-2.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167153**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 11:25 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18111 SDG#: PEK84-12

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	0.054	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.054	1
08357	Anthracene	120-12-7	N.D.	0.011	0.054	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.054	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.054	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.054	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.054	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.054	1
08357	Chrysene	218-01-9	N.D.	0.011	0.054	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.054	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.054	1
08357	Fluorene	86-73-7	N.D.	0.011	0.054	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.054	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.054	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.054	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.054	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.054	1
08357	Pyrene	129-00-0	N.D.	0.011	0.054	1

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	26.9	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	0.0501	0.00033	0.0050	1

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

Sample Description: WS-011(1.5-2.0)081813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7167153
LL Group # 1412650
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/18/2013 11:25 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18111 SDG#: PEK84-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.04	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	2.86	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	I132322AA	08/21/2013 00:32	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/21/2013 00:32	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13232WAK026	08/24/2013 01:57	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13232WAK026	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 22:47	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 22:47	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 22:47	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 22:47	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 22:47	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 22:47	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 22:47	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 22:47	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 22:47	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 22:47	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 22:47	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 10:26	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1

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

Sample Description: WS-011(1.5-2.0)081813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7167153
LL Group # 1412650
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/18/2013 11:25 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18111 SDG#: PEK84-12

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	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: **WS-011(5.0-5.5)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167154**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 11:30 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18112 SDG#: PEK84-13

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

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

Sample Description: **WS-011(5.0-5.5)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167154**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 11:30 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18112 SDG#: PEK84-13

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	
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	26.1	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	0.0446	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.84	0.0334	0.200	1

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

Sample Description: **WS-011(5.0-5.5)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167154**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 11:30 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18112 SDG#: PEK84-13

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	0.0018 J	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.79	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	I132322AA	08/21/2013 00:53	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/21/2013 00:53	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13232WAK026	08/24/2013 02:26	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13232WAK026	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 22:51	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 22:51	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 22:51	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 22:51	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 22:51	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 22:51	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 22:51	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 22:51	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 22:51	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 22:51	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 22:51	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 10:28	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: **WS-003 (Surface) 081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167155**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 11:50 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18003 SDG#: PEK84-14

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-003 (Surface) 081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167155**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 11:50 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18003 SDG#: PEK84-14

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 purge						
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	0.2 J	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	0.1 J	0.1	0.5	1
GC/MS Semivolatiles SW-846 8270C SIM						
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	0.015 J	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	0.024 J	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						
06256	Total Hardness as CaCO3	471-34-1	27.4	0.033	0.20	1
SW-846 6010B						
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0414	0.00033	0.0050	1

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

Sample Description: WS-003 (Surface) 081813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7167155
LL Group # 1412650
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/18/2013 11:50 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18003 SDG#: PEK84-14

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	
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.11	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.94	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0016 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132322AA	08/21/2013 01:14	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/21/2013 01:14	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	132321848004	08/24/2013 02:56	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	132321848004	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 13:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/25/2013 12:21	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	2	132321848004	08/25/2013 12:21	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/25/2013 12:21	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	2	132321848004	08/25/2013 12:21	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	2	132321848004	08/25/2013 12:21	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	2	132321848004	08/25/2013 12:21	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	2	132321848004	08/25/2013 12:21	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132321848004	08/25/2013 12:21	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132321848004	08/25/2013 12:21	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	2	132321848004	08/25/2013 12:21	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	2	132321848004	08/25/2013 12:21	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 10:30	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1

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

Sample Description: WS-003 (Surface) 081813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7167155
LL Group # 1412650
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/18/2013 11:50 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18003 SDG#: PEK84-14

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	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: WS-007(0.5-1.0)081813 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7167156
LL Group # 1412650
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/18/2013 12:10 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18007 SDG#: PEK84-15

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

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

Sample Description: **WS-007(0.5-1.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167156**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 12:10 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18007 SDG#: PEK84-15

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	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	0.018 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	0.012 J	0.010	0.051	1
08357	Chrysene	218-01-9	0.019 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	0.049 J	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	0.032 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	16.0	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0276	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	3.77	0.0334	0.200	1

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

Sample Description: **WS-007(0.5-1.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167156**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 12:10 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18007 SDG#: PEK84-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	1.60	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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132322AA	08/21/2013 01:35	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/21/2013 01:35	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13232WAK026	08/24/2013 03:25	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13232WAK026	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 23:06	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 23:06	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 23:06	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 23:06	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 23:06	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 23:06	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 23:06	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 23:06	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 23:06	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 23:06	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 23:06	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 10:32	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: **WS-001(0.5-1.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167157**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 12:25 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18001 SDG#: PEK84-16

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)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167157**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 12:25 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18001 SDG#: PEK84-16

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	
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	25.2	0.033	0.20	1
SW-846 6010B						
			mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0338	0.0033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.72	0.0334	0.200	1

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

Sample Description: **WS-001(0.5-1.0)081813 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167157**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 12:25 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18001 SDG#: PEK84-16

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	2.64	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	I132322AA	08/21/2013 01:56	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/21/2013 01:56	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13232WAK026	08/24/2013 03:54	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13232WAK026	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 23:10	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 23:10	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 23:10	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 23:10	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 23:10	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 23:10	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 23:10	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 23:10	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 23:10	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 23:10	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 23:10	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 10:34	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13238807903A	08/26/2013 17:16	Michelle L Lalli	1

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

Sample Description: **WS-EB-034-081813 Grab Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167158**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 13:30 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18E34 SDG#: PEK84-17EB*

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-034-081813 Grab Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167158**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 13:30 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18E34 SDG#: PEK84-17EB*

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						
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						
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1
Metals SM 2340 B-1997						
06256	Total Hardness as CaCO3	471-34-1	0.16 J	0.033	0.20	1
SW-846 6010B						
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	N.D.	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	0.0652 J	0.0334	0.200	1

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

Sample Description: **WS-EB-034-081813 Grab Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7167158**
 LL Group # **1412650**
 Account # **14739**

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

Collected: 08/18/2013 13:30 by HVA

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

Submitted: 08/20/2013 09:10

Reported: 08/27/2013 08:17

18E34 SDG#: PEK84-17EB*

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

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132322AA	08/20/2013 19:58	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132322AA	08/20/2013 19:58	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13232WAK026	08/24/2013 04:23	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13232WAK026	08/21/2013 08:50	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132376256001	08/25/2013 06:06	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132321848004	08/24/2013 23:13	John P Hook	1
07046	Barium	SW-846 6010B	1	132321848004	08/24/2013 23:13	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132321848004	08/24/2013 23:13	John P Hook	1
01750	Calcium	SW-846 6010B	1	132321848004	08/24/2013 23:13	John P Hook	1
07051	Chromium	SW-846 6010B	1	132321848004	08/24/2013 23:13	John P Hook	1
07055	Lead	SW-846 6010B	1	132321848004	08/24/2013 23:13	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132321848004	08/24/2013 23:13	John P Hook	1
07061	Nickel	SW-846 6010B	1	132321848004	08/24/2013 23:13	John P Hook	1
07036	Selenium	SW-846 6010B	1	132321848004	08/24/2013 23:13	John P Hook	1
07066	Silver	SW-846 6010B	1	132321848004	08/24/2013 23:13	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132321848004	08/24/2013 23:13	John P Hook	1
00259	Mercury	SW-846 7470A	1	132325713003	08/22/2013 10:36	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132321848004	08/21/2013 16:20	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132325713003	08/21/2013 12:37	Katlin N Cataldi	1

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 08/27/13 at 08:17 AM

Group Number: 1412650

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: I132322AA	Sample number(s): 7167139-7167148, 7167150-7167158								
Acetone	N.D.	3.0	5.0	ug/l	108		60-139		
Allyl Chloride	N.D.	0.1	0.5	ug/l	89		61-130		
Benzene	N.D.	0.1	0.5	ug/l	105		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	93		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	93		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	92		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	87		73-128		
Bromomethane	N.D.	0.1	0.5	ug/l	77		62-126		
2-Butanone	N.D.	1.0	5.0	ug/l	124		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	112		80-120		
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	108		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	100		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	93		80-129		
Chlorobenzene	N.D.	0.1	0.5	ug/l	106		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	78		68-120		
Chloroform	N.D.	0.1	0.5	ug/l	101		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	84		55-120		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	103		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	105		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	99		64-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	92		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	94		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	103		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	104		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	78		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	102		80-120		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	99		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	99		80-123		
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	99		80-120		
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	103		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	90		75-145		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	108		80-120		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	105		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	87		75-122		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	104		80-121		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	90		80-123		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	95		80-120		
Ethyl ether	N.D.	0.1	0.5	ug/l	102		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	105		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	99		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	89		73-120		

*- Outside of specification

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 08/27/13 at 08:17 AM

Group Number: 1412650

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCS %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Isopropylbenzene	N.D.	0.1	0.5	ug/l	102		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	103		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	82		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	100		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	111		80-120		
Styrene	N.D.	0.1	0.5	ug/l	102		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	99		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	111		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	90		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	117		65-131		
Toluene	N.D.	0.1	0.5	ug/l	106		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	92		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	89		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	91		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	106		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	102		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	97		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	105		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	107		80-120		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	107		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	82		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	102		80-120		

Batch number: 13232WAK026

Sample number(s): 7167140-7167148,7167150-7167158

Acenaphthene	N.D.	0.010	0.050	ug/l	107		77-118		
Acenaphthylene	N.D.	0.010	0.050	ug/l	117		80-123		
Anthracene	N.D.	0.010	0.050	ug/l	114		78-123		
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	102		73-127		
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	107		72-120		
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	102		79-136		
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	99		64-130		
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	102		73-131		
Chrysene	N.D.	0.010	0.050	ug/l	101		76-125		
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	94		58-131		
Fluoranthene	N.D.	0.010	0.050	ug/l	115		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	91		62-130		
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	111		80-126		
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	108		81-124		
Naphthalene	N.D.	0.030	0.050	ug/l	103		75-120		
Phenanthrene	N.D.	0.030	0.050	ug/l	104		75-120		
Pyrene	N.D.	0.010	0.050	ug/l	101		71-130		

Batch number: 132321848004

Sample number(s): 7167140-7167158

Arsenic	N.D.	0.0068	0.0200	mg/l	97		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	99		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	100		90-112		
Calcium	N.D.	0.0334	0.200	mg/l	98		90-110		
Chromium	N.D.	0.0016	0.0150	mg/l	97		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	103		88-110		
Magnesium	N.D.	0.0167	0.100	mg/l	97		90-110		
Nickel	N.D.	0.0015	0.0100	mg/l	103		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	97		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	95		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	96		90-110		

*- Outside of specification

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 08/27/13 at 08:17 AM

Group Number: 1412650

<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: 132325713003 Mercury	Sample number(s): 7167140-7167158 N.D.	0.00006	0.00020	mg/l	96		80-120		
Batch number: 13238807903A HEM (oil & grease)	Sample number(s): 7167140-7167157 N.D.	1.4	5.0	mg/l	100	95	78-114	6	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: I132322AA	Sample number(s): 7167139-7167148, 7167150-7167158 UNSPK: 7167146								
Acetone	131	123	57-163	7	30				
Allyl Chloride	94	92	56-160	2	30				
Benzene	110	106	87-126	4	30				
Bromobenzene	93	91	80-123	2	30				
Bromochloromethane	95	92	82-125	2	30				
Bromodichloromethane	96	93	82-133	4	30				
Bromoform	84	82	60-138	3	30				
Bromomethane	77	77	66-130	0	30				
2-Butanone	134	126	56-160	6	30				
n-Butylbenzene	118	112	83-131	4	30				
sec-Butylbenzene	113	109	84-128	4	30				
tert-Butylbenzene	103	99	84-135	4	30				
Carbon Tetrachloride	101	98	81-148	3	30				
Chlorobenzene	108	105	78-133	3	30				
Chloroethane	80	79	70-139	1	30				
Chloroform	106	102	86-136	3	30				
Chloromethane	85	84	49-135	1	30				
2-Chlorotoluene	106	103	75-134	3	30				
4-Chlorotoluene	107	103	76-134	4	30				
1,2-Dibromo-3-chloropropane	104	99	43-143	5	30				
Dibromochloromethane	93	90	79-125	3	30				
1,2-Dibromoethane	100	97	84-127	3	30				
Dibromomethane	96	92	83-126	4	30				
1,2-Dichlorobenzene	106	102	83-117	5	30				
1,3-Dichlorobenzene	104	100	79-132	4	30				
1,4-Dichlorobenzene	105	100	79-120	4	30				
Dichlorodifluoromethane	82	82	28-136	0	30				
1,1-Dichloroethane	107	104	88-136	3	30				
1,2-Dichloroethane	98	95	82-135	4	30				
1,1-Dichloroethene	107	103	83-150	3	30				
cis-1,2-Dichloroethene	102	99	82-129	3	30				
trans-1,2-Dichloroethene	108	105	88-127	3	30				
Dichlorofluoromethane	94	91	81-161	3	30				
1,2-Dichloropropane	114	110	91-126	3	30				
1,3-Dichloropropane	106	104	80-127	3	30				
2,2-Dichloropropane	91	89	80-134	2	30				
1,1-Dichloropropene	113	108	86-139	4	30				

*- Outside of specification

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 08/27/13 at 08:17 AM

Group Number: 1412650

Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
cis-1,3-Dichloropropene	90	89	74-132	1	30				
trans-1,3-Dichloropropene	94	92	71-128	1	30				
Ethyl ether	100	99	57-139	0	30				
Ethylbenzene	110	106	80-140	4	30				
Freon 113	107	103	77-147	4	30				
Hexachlorobutadiene	88	84	65-128	5	30				
Isopropylbenzene	107	103	81-133	4	30				
p-Isopropyltoluene	107	102	84-124	4	30				
Methyl Tertiary Butyl Ether	81*	81*	82-132	0	30				
4-Methyl-2-Pentanone	99	95	69-149	4	30				
Methylene Chloride	107	104	77-135	3	30				
n-Propylbenzene	117	112	79-131	4	30				
Styrene	104	100	63-151	4	30				
1,1,1,2-Tetrachloroethane	101	98	87-126	4	30				
1,1,2,2-Tetrachloroethane	114	111	75-131	2	30				
Tetrachloroethene	93	91	75-129	3	30				
Tetrahydrofuran	124	117	56-154	6	30				
Toluene	110	107	83-127	3	30				
1,2,3-Trichlorobenzene	92	89	73-125	3	30				
1,2,4-Trichlorobenzene	90	87	77-120	4	30				
1,1,1-Trichloroethane	97	95	85-140	2	30				
1,1,2-Trichloroethane	107	104	85-129	3	30				
Trichloroethene	107	103	85-131	4	30				
Trichlorofluoromethane	100	100	73-139	0	30				
1,2,3-Trichloropropane	108	103	76-120	5	30				
1,2,4-Trimethylbenzene	111	106	87-126	5	30				
1,3,5-Trimethylbenzene	111	106	89-129	4	30				
Vinyl Chloride	84	84	62-135	0	30				
Xylene (Total)	106	102	81-137	4	30				

Batch number: 13232WAK026 Sample number(s): 7167140-7167148,7167150-7167158 UNSPK: 7167146

Acenaphthene	96	95	47-136	0	30				
Acenaphthylene	113	114	33-146	1	30				
Anthracene	41*	36*	69-119	11	30				
Benzo(a)anthracene	85	80	37-150	5	30				
Benzo(a)pyrene	55*	52*	64-123	6	30				
Benzo(b)fluoranthene	84	79	33-152	5	30				
Benzo(g,h,i)perylene	78	73	36-138	6	30				
Benzo(k)fluoranthene	78	73	31-142	6	30				
Chrysene	87	82	34-135	5	30				
Dibenz(a,h)anthracene	81	75	17-134	6	30				
Fluoranthene	107	107	39-147	1	30				
Fluorene	100	101	38-149	1	30				
Indeno(1,2,3-cd)pyrene	76	70	29-143	7	30				
1-Methylnaphthalene	110	110	49-152	1	30				
2-Methylnaphthalene	106	106	51-146	0	30				
Naphthalene	103	102	58-131	0	30				
Phenanthrene	101	103	48-140	2	30				
Pyrene	88	82	59-125	6	30				

Batch number: 132321848004 Sample number(s): 7167140-7167158 UNSPK: 7167146 BKG: 7167146
Arsenic 102 104 81-123 2 20 N.D. N.D. 0 (1) 20

*- Outside of specification

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 08/27/13 at 08:17 AM

Group Number: 1412650

Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup</u> <u>RPD</u> <u>Max</u>
Barium	101	102	78-118	1	20	0.0354	0.0353	0	20
Cadmium	103	103	83-116	0	20	N.D.	N.D.	0 (1)	20
Calcium	92	96	81-118	2	20	5.92	5.92	0	20
Chromium	100	101	81-120	1	20	0.0017 J	N.D.	200* (1)	20
Lead	105	106	75-125	1	20	N.D.	N.D.	0 (1)	20
Magnesium	91	96	75-125	2	20	2.77	2.76	0	20
Nickel	105	106	86-115	1	20	N.D.	N.D.	0 (1)	20
Selenium	101	100	75-125	1	20	N.D.	N.D.	0 (1)	20
Silver	97	98	75-125	1	20	N.D.	N.D.	0 (1)	20
Vanadium	100	102	90-111	2	20	N.D.	N.D.	0 (1)	20
Batch number: 132325713003	Sample number(s): 7167140-7167158 UNSPK: 7167146 BKG: 7167146								
Mercury	96	95	80-120	1	20	N.D.	N.D.	0 (1)	20
Batch number: 13238807903A	Sample number(s): 7167140-7167157 UNSPK: 7167146 BKG: 7167146								
HEM (oil & grease)	42*	62*	78-114	38*	29	N.D.	N.D.	0 (1)	18

Surrogate Quality Control

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

Analysis Name: BTEX 25-ml purge
Batch number: I132322AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7167139	95	101	102	93
7167140	97	105	101	94
7167141	97	106	102	94
7167142	98	102	102	93
7167143	97	102	102	92
7167144	98	105	103	93
7167145	98	102	102	93
7167146	97	102	103	94
7167147	94	102	104	102
7167148	94	99	104	102
7167150	95	103	102	95
7167151	96	102	101	94
7167152	96	104	102	95
7167153	96	103	102	93
7167154	97	102	102	92
7167155	97	105	102	94
7167156	97	100	102	92
7167157	98	104	103	94
7167158	96	102	102	94
Blank	95	101	102	93
LCS	93	101	104	100
MS	94	102	104	102
MSD	94	99	104	102

*- Outside of specification

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 08/27/13 at 08:17 AM

Group Number: 1412650

Surrogate Quality Control

Limits:	77-114	74-113	77-110	78-110
Analysis Name: PAHs in waters by SIM				
Batch number: 13232WAK026				
	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10	
7167140	99	71	107	
7167141	99	76	104	
7167142	100	74	106	
7167143	98	74	103	
7167144	101	78	106	
7167145	96	69	102	
7167146	107	74	111	
7167147	100	78	105	
7167148	100	72	105	
7167150	99	76	101	
7167151	104	81	107	
7167152	99	65	103	
7167153	97	57*	101	
7167154	98	63	100	
7167155	91	47*	101	
7167156	102	92	108	
7167157	98	65	105	
7167158	103	91	107	
Blank	111	111	110	
LCS	104	104	106	
MS	100	78	105	
MSD	100	72	105	
Limits:	44-137	62-141	51-136	

*- Outside of specification

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ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only

Group # 1412650 Sample # 7167139-58

Instructions on reverse side correspond with circled numbers.

2 of 3

1 Client Information				4 Matrix				5 Analyses Requested								6 Remarks			
Facility #/SID <u>Mayflower Pipeline Incident</u>				Soil <input type="checkbox"/>	Water <input type="checkbox"/>	Oil <input type="checkbox"/>	Total # of Containers	Preservation Code											
Site Address <u>Mayflower, AR</u>								Sediment <input type="checkbox"/>	Potable <input type="checkbox"/>	Ground <input type="checkbox"/>	Air <input type="checkbox"/>	H	N	H					
ExxonMobil PM <u>Scott Bushroe</u>		Cost Center/AFE		NPDES <input type="checkbox"/>	Surface <input checked="" type="checkbox"/>									SCR#: _____					
Consultant/Office <u>ARCATS</u>																Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other			
Consultant PM <u>Steve Barrick</u>		Consultant Phone # <u>919-202-6799</u>																	
Sampler <u>H. Van Allen</u>																7 Turnaround Time Requested (TAT) (please circle)			
2 Sample Identification				3 Collected		Grab		Composite											
Date		Time																	
<u>WS-003(surface)081713</u>		<u>8/17/13</u>		<u>1130</u>		<u>X</u>													
<u>WS-007(0.5-1.0)081713</u>		<u>1150</u>		<u>X</u>															
<u>WS-001(0.5-1.0)081713</u>		<u>1200</u>		<u>X</u>															
<u>WS-BKG-002(surface)081713</u>		<u>1215</u>		<u>X</u>															
<u>DUP-WS-72081713</u>		<u>—</u>		<u>X</u>															
<u>WS-EB-33-081713</u>		<u>1300</u>																	
<u>WS-TB-06-081813</u>		<u>8/18/13</u>		<u>—</u>															
<u>WS-014(1.5-2.0)081813</u>		<u>835</u>		<u>X</u>															
<u>WS-014(5.5-6.0)081813</u>		<u>840</u>		<u>X</u>															
<u>WS-012(1.5-2.0)081813</u>		<u>905</u>		<u>X</u>															
<u>WS-012(5.0-5.5)081813</u>		<u>910</u>		<u>X</u>															
<u>WS-010(1.5-2.0)081813</u>		<u>930</u>		<u>X</u>															
Standard <u>5 day</u> 4 day				Relinquished by <u>H. Van Allen</u>				Date <u>8/18/13</u> Time <u>1800</u>		Received by _____				Date _____ Time _____					
72 hour 48 hour 24 hour				Relinquished by _____				Date _____ Time _____		Received by _____				Date _____ Time _____					
8 Data Package (circle if required)				Relinquished by _____				Date _____ Time _____		Received by _____				Date _____ Time _____					
Type I - Full		Type VI (Raw Data)		NJ Reduced		Other _____		EDD (circle if required)		Locus EIM (default)		Other _____		Relinquished by Commercial Carrier					
Type I - Full		Type VI (Raw Data)		NJ Reduced		Other _____		EDD (circle if required)		Locus EIM (default)		Other _____		UPS <input checked="" type="checkbox"/> FedEx _____ Other <u>Southwest</u>		Received by <u>B. W. Bann</u>		Date <u>8-20-13</u> Time <u>910</u>	
Temperature Upon Receipt <u>0.3-2.4 °C</u>								Custody Seals Intact? <u>Yes</u> No											

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

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

ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only
Group # 1412650 Sample # 7167139-58
Instructions on reverse side correspond with circled numbers.

30f3

1 Client Information				4 Matrix			5 Analyses Requested										6 Remarks		
Preservation Code							SCR#: _____												
Facility #/SID							Soil <input type="checkbox"/>	Water <input type="checkbox"/>	Oil <input type="checkbox"/>	Total # of Containers	Preservation Codes								
Site Address				Sediment <input type="checkbox"/>	Potable <input type="checkbox"/>	Air <input type="checkbox"/>					VOC	PAHs	RCRA Metals	Dis. Metals	HEM Oil/Grease	H = HCl		T = Thiosulfate	
ExxonMobil PM							NPDES <input type="checkbox"/>	Surface <input checked="" type="checkbox"/>	Ground <input type="checkbox"/>	#						Z	H	N = HNO ₃	
Consultant/Office				Grab <input type="checkbox"/>	Composite <input type="checkbox"/>	Surface <input checked="" type="checkbox"/>					Address	N, V, Ca, Mg	O = Other	S = H ₂ SO ₄				O = Other	
Consultant PM							7 Turnaround Time Requested (TAT) (please circle)												
Consultant Phone #				Standard		4 day		Date		Time		Received by		Date		Time			
Sampler				72 hour		48 hour		Date		Time		Received by		Date		Time			
Sample Identification				8 Data Package (circle if required)		EDD (circle if required)		Relinquished by Commercial Carrier				Received by							
Date				Type I - Full		Locus EIM (default)		UPS <input checked="" type="checkbox"/>				FedEx _____				Other <u>Southwest</u>			
Time				Type VI (Raw Data)		Other _____		Temperature Upon Receipt <u>0.3-2.4</u> °C				Custody Seals Intact? <u>Yes</u>							
Grab				NJ Reduced		Other _____		Date				Time							
Composite				Other _____		Other _____		Date				Time							
Mayflower Pipeline Incident																			
Mayflower, AR																			
Scott Bushroe																			
ARCA-DIS																			
Steve Barrick																			
919-202-6799																			
H. Van Allen																			
WS-010(3.5-4.0)081813																			
8/18/13 935																			
WS-006(0.5-1.0)081813																			
945																			
WS-006(0.5-1.0)081813 ms/msd																			
945																			
WS-005(surface)081813																			
1020																			
WS-002(surface)081813																			
1045																			
WS-018(surface)081813																			
1105																			
WS-011(1.5-2.0)081813																			
1125																			
WS-011(5.0-5.5)081813																			
1130																			
WS-003(surface)081813																			
1150																			
WS-007(0.5-1.0)081813																			
1215																			
WS-001(0.5-1.0)081813																			
1225																			
WS-EB-034-081813																			
1330																			

Rachel L. Kreamer A# 14739 Gr.# 1412650 Samples 7167139-58

From: Mott, Lyndi [Lyndi.Mott@arcadis-us.com]
Sent: Wednesday, August 21, 2013 11:57 AM
To: Rachel L. Kreamer
Cc: Kathy Klinefelter
Subject: RE: Collection time on a surface water submitted 8/20/13

The collection time is 1210 for sample WS-007(0.5-1.0)081813.

Lyndi Mott

-----Original Message-----

From: Rachel L. Kreamer [mailto:RKreamer@lanasterlabs.com]
Sent: Wednesday, August 21, 2013 10:54 AM
To: Mott, Lyndi
Cc: Kathy Klinefelter
Subject: Collection time on a surface water submitted 8/20/13

Lyndi,

The labels for sample WS-007(0.5-1.0)081813 have a collection time of 1210. The chain says 1215. Which time should be used?

Thanks
Rache;l

-----Original Message-----

From: 39Scanner@lanasterlabs.com [mailto:39Scanner@lanasterlabs.com]
Sent: Wednesday, August 21, 2013 11:51 AM
To: Rachel L. Kreamer
Subject:

This E-mail was sent from "RNP367EC2" (MP 4001/LD140).

Scan Date: 08.21.2013 11:50:44 (-0400)
Queries to: 39Scanner@lanasterlabs.com

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Environmental Sample Administration
Receipt Documentation Log

1412650

Client/Project: Exxon mobil
Date of Receipt: 8-20-13
Time of Receipt: 910
Source Code: 60-1

Shipping Container Sealed: YES NO

Custody Seal Present * : YES NO

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

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	D146	0.5	TB	WI	X	B	
2		0.5					
3		1.6					
4		0.5					
5		0.6					
6		1.0					

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

Paperwork Discrepancy/Unpacking Problems: 081813 Rec 8/21/13
WS-009 (0.5-1.0) Time = 1210 - Grs. 1412650 + 1412654
EB -034 Rec 7 Total Did not Rec 026
Gr. 1412650

Unpacker Signature/Emp#: Brenely Baely 2299 Date/Time: 8-20-13 1035

Issued by Dept. 6042 Management

Environmental Sample Administration
Receipt Documentation Log

1412650

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Date of Receipt: 8.20.13

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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
17	D+146	2.1	TB	WI	X	B	
18		2.4					
19		0.5					
20		2.1					
21		0.3					
22	∨	0.8	∨	∨	∨	∨	

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: Brenely Baugh 2299 Date/Time: 8.20.13 1035

Issued by Dept. 6042 Management

Environmental Sample Administration 1412650
Receipt Documentation Log

Client/Project: Exxon mobil
Date of Receipt: 8-20-13
Time of Receipt: 910
Source Code: 60-1

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

Temperature of Shipping Containers

Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
13	DH146	1.7	TB	WI	Y	B	
14	↓	0.6	↓	↓	↓	↓	
15	↓	2.4	↓	↓	↓	↓	
4	/						
5	/						
6	/						

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: Buanelly Barely 2299 Date/Time: 8-20-13 1035

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 limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C – result confirmed by reanalysis.

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

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

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

Inorganic Qualifiers

- B** Value is $<$ CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike sample not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- *** Duplicate analysis not within control limits
- +** Correlation coefficient for MSA <0.995

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

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

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

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

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