

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

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

August 20, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 08/13/2013

Group Number: 1410957

SDG: PEK51

PO Number: B0086003.1301

State of Sample Origin: AR

Client Sample DescriptionLancaster Labs (LL) #

WS-014(1.5-2.0)081213 Grab Surface Water	7158512
WS-014(5.5-6.0)081213 Grab Surface Water	7158513
WS-012(1.5-2.0)081213 Grab Surface Water	7158514
WS-012(5.0-5.5)081213 Grab Surface Water	7158515
WS-010(1.5-2.0)081213 Grab Surface Water	7158516
WS-010(3.5-4.0)081213 Grab Surface Water	7158517
WS-006(0.5-1.0)081213 Grab Surface Water	7158518
WS-005(Surface)081213 Grab Surface Water	7158519
WS-011(1.5-2.0)081213 Grab Surface Water	7158520
WS-011(5.0-5.5)081213 Grab Surface Water	7158521
WS-003(Surface)081213 Grab Surface Water	7158522
WS-002(Surface)081213 Grab Surface Water	7158523
WS-018(Surface)081213 Grab Surface Water	7158524
WS-007(0.5-1.0)081213 Grab Surface Water	7158525
WS-001(0.5-1.0)081213 Grab Surface Water	7158526
WS-008(Surface)081213 Grab Surface Water	7158527
WS-BKG-002(Surface)081213 Grab Surface Water	7158528
WS-EB-28-081213 Grab Water	7158529
WS-TB-122-081213 Water	7158530
DUP-WS-70-081213 Grab Surface Water	7158531

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

ELECTRONIC ARCADIS
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COPY TO

Attn: Stephen Barrick

Attn: Lyndi Mott

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

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1410957

General Comments:

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

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

Project specific QC samples are not included in this data set

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

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

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

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

Batch #: C132261AA (Sample number(s): 7158512-7158527, 7158529-7158530 UNSPK: 7158512)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: Trichlorofluoromethane

Batch #: C132271AA (Sample number(s): 7158528, 7158531 UNSPK: 7158531)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: Trichlorofluoromethane

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: Chloroethane, 1,2,3-Trichloropropane

SW-846 8270C SIM, GC/MS Semivolatiles

Batch #: 13227WAJ026 (Sample number(s): 7158512-7158529, 7158531)

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7158512, 7158513, 7158514, 7158515, 7158516, 7158517, 7158518, 7158519, 7158520, 7158521, 7158522, 7158523, 7158524, 7158525, 7158531

Sample #s: 7158526, 7158527, 7158528, 7158529

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

Sample #s: 7158512, 7158513, 7158514, 7158515, 7158516, 7158517, 7158518, 7158519, 7158520, 7158521, 7158522, 7158523, 7158524, 7158525, 7158531

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis. The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Sample Description: WS-014(1.5-2.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158512
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12141 SDG#: PEK51-01

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

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

Sample Description: WS-014(1.5-2.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158512
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12141 SDG#: PEK51-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.057	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.057	1
08357	Anthracene	120-12-7	N.D.	0.011	0.057	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.057	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.057	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.057	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.057	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.057	1
08357	Chrysene	218-01-9	N.D.	0.011	0.057	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.057	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.057	1
08357	Fluorene	86-73-7	N.D.	0.011	0.057	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.057	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.057	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.057	1
08357	Naphthalene	91-20-3	N.D.	0.034	0.057	1
08357	Phenanthrene	85-01-8	N.D.	0.034	0.057	1
08357	Pyrene	129-00-0	N.D.	0.011	0.057	1

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	26.5	0.033	0.20

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

Sample Description: WS-014(1.5-2.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158512
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12141 SDG#: PEK51-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0272	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.08	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	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
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132261AA	08/14/2013 14:21	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 14:21	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 12:56	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 19:24	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 19:24	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 19:24	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 19:24	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 19:24	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 19:24	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 19:24	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 19:24	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 19:24	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 19:24	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 19:24	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 03:45	Parker D Lindstrom	1

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

Sample Description: WS-014(1.5-2.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158512
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/13/2013 09:20

Highlands Ranch CO 80129

Reported: 08/20/2013 10:23

12141 SDG#: PEK51-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

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

Sample Description: WS-014(5.5-6.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158513
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12142 SDG#: PEK51-02

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

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

Sample Description: WS-014(5.5-6.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158513
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12142 SDG#: PEK51-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.055	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.055	1
08357	Anthracene	120-12-7	N.D.	0.011	0.055	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.055	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.055	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.055	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.055	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.055	1
08357	Chrysene	218-01-9	N.D.	0.011	0.055	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.055	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.055	1
08357	Fluorene	86-73-7	N.D.	0.011	0.055	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.055	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.055	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.055	1
08357	Naphthalene	91-20-3	N.D.	0.033	0.055	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.055	1
08357	Pyrene	129-00-0	N.D.	0.011	0.055	1

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	26.9	0.033	0.20

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

Sample Description: WS-014(5.5-6.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158513
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12142 SDG#: PEK51-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0365	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.18	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.79	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0017 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.	1.7 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132261AA	08/14/2013 14:43	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 14:43	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 13:26	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 19:28	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 19:28	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 19:28	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 19:28	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 19:28	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 19:28	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 19:28	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 19:28	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 19:28	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 19:28	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 19:28	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 03:54	Parker D Lindstrom	1

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

Sample Description: WS-014(5.5-6.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158513
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/13/2013 09:20

Highlands Ranch CO 80129

Reported: 08/20/2013 10:23

12142 SDG#: PEK51-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

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

Sample Description: WS-012(1.5-2.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158514
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12121 SDG#: PEK51-03

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

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

Sample Description: WS-012(1.5-2.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158514
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12121 SDG#: PEK51-03

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	26.5	0.033	0.20

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

Sample Description: WS-012(1.5-2.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158514
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12121 SDG#: PEK51-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0315	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.07	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.75	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	C132261AA	08/14/2013 15:06	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 15:06	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 13:56	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 19:40	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 19:40	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 19:40	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 19:40	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 19:40	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 19:40	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 19:40	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 19:40	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 19:40	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 19:40	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 19:40	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 03:56	Parker D Lindstrom	1

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

Sample Description: WS-012(1.5-2.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158514
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/13/2013 09:20

Highlands Ranch CO 80129

Reported: 08/20/2013 10:23

12121 SDG#: PEK51-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

Sample Description: WS-012(5.0-5.5)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158515
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12122 SDG#: PEK51-04

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

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

Sample Description: WS-012(5.0-5.5)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158515
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12122 SDG#: PEK51-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.056	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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	26.1	0.033	0.20

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

Sample Description: WS-012(5.0-5.5)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158515
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12122 SDG#: PEK51-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0294	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.99	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.71	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132261AA	08/14/2013 17:43	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 17:43	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 14:25	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 19:44	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 19:44	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 19:44	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 19:44	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 19:44	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 19:44	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 19:44	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 19:44	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 19:44	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 19:44	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 19:44	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 03:58	Parker D Lindstrom	1

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

Sample Description: WS-012(5.0-5.5)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158515
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12122 SDG#: PEK51-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

Sample Description: WS-010(1.5-2.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158516
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 09:00 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12101 SDG#: PEK51-05

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

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

Sample Description: WS-010(1.5-2.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158516
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 09:00 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12101 SDG#: PEK51-05

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	23.9	0.033	0.20

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

Sample Description: WS-010(1.5-2.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158516
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 09:00 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12101 SDG#: PEK51-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0212	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.46	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	2.48	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0018 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132261AA	08/14/2013 18:09	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 18:09	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 14:55	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 19:47	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 19:47	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 19:47	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 19:47	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 19:47	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 19:47	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 19:47	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 19:47	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 19:47	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 19:47	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 19:47	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 04:00	Parker D Lindstrom	1

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

Sample Description: WS-010(1.5-2.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158516
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 09:00 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12101 SDG#: PEK51-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

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

Sample Description: WS-010(3.5-4.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158517
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 09:10 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12102 SDG#: PEK51-06

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

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

Sample Description: WS-010(3.5-4.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158517
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 09:10 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12102 SDG#: PEK51-06

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	22.1	0.033	0.20

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

Sample Description: WS-010(3.5-4.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158517
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 09:10 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12102 SDG#: PEK51-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0240	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.07	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.30	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0017 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	C132261AA	08/14/2013 18:32	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 18:32	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 15:25	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 19:51	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 19:51	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 19:51	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 19:51	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 19:51	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 19:51	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 19:51	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 19:51	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 19:51	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 19:51	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 19:51	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 04:06	Parker D Lindstrom	1

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

Sample Description: WS-010(3.5-4.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158517
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 09:10 by HVA

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/13/2013 09:20

Highlands Ranch CO 80129

Reported: 08/20/2013 10:23

12102 SDG#: PEK51-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

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

Sample Description: WS-006(0.5-1.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158518
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 09:30 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12006 SDG#: PEK51-07

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

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

Sample Description: WS-006(0.5-1.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158518
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 09:30 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12006 SDG#: PEK51-07

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	23.9	0.033	0.20

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

Sample Description: WS-006(0.5-1.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158518
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 09:30 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12006 SDG#: PEK51-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0337	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.49	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	2.47	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.	2.4 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	C132261AA	08/14/2013 18:54	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 18:54	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 15:55	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 19:55	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 19:55	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 19:55	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 19:55	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 19:55	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 19:55	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 19:55	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 19:55	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 19:55	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 19:55	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 19:55	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 04:08	Parker D Lindstrom	1

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

Sample Description: WS-006(0.5-1.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158518
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 09:30 by HVA

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/13/2013 09:20

Highlands Ranch CO 80129

Reported: 08/20/2013 10:23

12006 SDG#: PEK51-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

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

Sample Description: WS-005(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158519
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 09:50 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12005 SDG#: PEK51-08

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

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

Sample Description: WS-005(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158519
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 09:50 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12005 SDG#: PEK51-08

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	26.9	0.033	0.20

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

Sample Description: WS-005(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158519
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 09:50 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12005 SDG#: PEK51-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0251	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.22	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	2.75	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	C132261AA	08/14/2013 19:17	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 19:17	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 16:25	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 19:59	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 19:59	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 19:59	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 19:59	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 19:59	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 19:59	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 19:59	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 19:59	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 19:59	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 19:59	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 19:59	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 04:10	Parker D Lindstrom	1

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

Sample Description: WS-005(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158519
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 09:50 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12005 SDG#: PEK51-08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

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

Sample Description: WS-011(1.5-2.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158520
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 10:40 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12111 SDG#: PEK51-09

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-011(1.5-2.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158520
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 10:40 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12111 SDG#: PEK51-09

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	27.3	0.033	0.20

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

Sample Description: WS-011(1.5-2.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158520
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 10:40 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12111 SDG#: PEK51-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0288	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.21	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	2.87	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	C132261AA	08/14/2013 19:39	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 19:39	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 16:55	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 20:03	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 20:03	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 20:03	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 20:03	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 20:03	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 20:03	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 20:03	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 20:03	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 20:03	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 20:03	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 20:03	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 04:12	Parker D Lindstrom	1

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

Sample Description: WS-011(1.5-2.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158520
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 10:40 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12111 SDG#: PEK51-09

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

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

Sample Description: WS-011(5.0-5.5)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158521
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 10:50 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12112 SDG#: PEK51-10

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

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

Sample Description: WS-011(5.0-5.5)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158521
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 10:50 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12112 SDG#: PEK51-10

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	27.2	0.033	0.20

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

Sample Description: WS-011(5.0-5.5)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158521
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 10:50 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12112 SDG#: PEK51-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0329	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
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	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.	1.7 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132261AA	08/14/2013 20:02	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 20:02	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 17:25	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 20:06	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 20:06	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 20:06	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 20:06	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 20:06	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 20:06	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 20:06	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 20:06	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 20:06	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 20:06	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 20:06	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 04:14	Parker D Lindstrom	1

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

Sample Description: WS-011(5.0-5.5)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158521
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 10:50 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12112 SDG#: PEK51-10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

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

Sample Description: WS-003(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158522
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 11:00 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12003 SDG#: PEK51-11

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-003(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158522
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 11:00 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12003 SDG#: PEK51-11

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	27.1	0.033	0.20

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

Sample Description: WS-003 (Surface) 081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158522
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 11:00 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12003 SDG#: PEK51-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0553	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.15	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	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	C132261AA	08/14/2013 20:25	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 20:25	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 17:55	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 20:10	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 20:10	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 20:10	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 20:10	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 20:10	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 20:10	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 20:10	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 20:10	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 20:10	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 20:10	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 20:10	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 04:16	Parker D Lindstrom	1

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

Sample Description: WS-003 (Surface) 081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158522
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 11:00 by HVA

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/13/2013 09:20

Highlands Ranch CO 80129

Reported: 08/20/2013 10:23

12003 SDG#: PEK51-11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

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

Sample Description: WS-002(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158523
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 10:00 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12002 SDG#: PEK51-12

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-002(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158523
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 10:00 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12002 SDG#: PEK51-12

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	28.0	0.033	0.20

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

Sample Description: WS-002(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158523
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 10:00 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12002 SDG#: PEK51-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0314	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.43	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	2.91	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	C132261AA	08/14/2013 20:47	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 20:47	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 18:25	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 19:02	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 19:02	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 19:02	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 19:02	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 19:02	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 19:02	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 19:02	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 19:02	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 19:02	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 19:02	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 19:02	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 04:18	Parker D Lindstrom	1

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

Sample Description: WS-002 (Surface) 081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158523
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 10:00 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12002 SDG#: PEK51-12

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

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

Sample Description: WS-018(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158524
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12018 SDG#: PEK51-13

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-018(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158524
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12018 SDG#: PEK51-13

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	26.9	0.033	0.20

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

Sample Description: WS-018(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158524
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12018 SDG#: PEK51-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0488	0.00033	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
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	2.82	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
SW-846 7470A						
			mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	1.6 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132261AA	08/14/2013 21:09	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 21:09	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 18:54	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 20:14	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 20:14	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 20:14	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 20:14	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 20:14	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 20:14	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 20:14	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 20:14	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 20:14	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 20:14	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 20:14	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 04:20	Parker D Lindstrom	1

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

Sample Description: WS-018(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158524
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12018 SDG#: PEK51-13

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

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

Sample Description: WS-007(0.5-1.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158525
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 11:20 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12007 SDG#: PEK51-14

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

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

Sample Description: WS-007(0.5-1.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158525
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 11:20 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12007 SDG#: PEK51-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	0.2 J	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	0.014 J	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.011 J	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	0.022 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	0.015 J	0.010	0.051	1
08357	Chrysene	218-01-9	0.024 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	0.058	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	0.038 J	0.010	0.051	1

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

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	16.3	0.033	0.20

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

Sample Description: WS-007(0.5-1.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158525
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 11:20 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12007 SDG#: PEK51-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0255	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	3.88	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	1.61	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0021 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	2.5 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	C132261AA	08/14/2013 21:31	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 21:31	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 19:24	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 20:26	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 20:26	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 20:26	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 20:26	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 20:26	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 20:26	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 20:26	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 20:26	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 20:26	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 20:26	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 20:26	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 04:22	Parker D Lindstrom	1

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

Sample Description: WS-007(0.5-1.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158525
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 11:20 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12007 SDG#: PEK51-14

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

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

Sample Description: WS-001(0.5-1.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158526
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 11:30 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12001 SDG#: PEK51-15

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

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

Sample Description: WS-001(0.5-1.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158526
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 11:30 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12001 SDG#: PEK51-15

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	0.050	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.050	1
08357	Anthracene	120-12-7	N.D.	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.050	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.050	1
08357	Chrysene	218-01-9	N.D.	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.050	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.050	1
08357	Fluorene	86-73-7	N.D.	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.050	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.050	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.050	1
08357	Pyrene	129-00-0	N.D.	0.010	0.050	1
The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.						
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	24.3	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0296	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1

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

Sample Description: WS-001(0.5-1.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158526
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 11:30 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12001 SDG#: PEK51-15

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	
01750	Calcium	7440-70-2	5.61	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.50	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.	2.0 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	C132261AA	08/14/2013 21:54	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 21:54	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 19:54	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 20:30	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 20:30	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 20:30	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 20:30	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 20:30	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 20:30	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 20:30	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 20:30	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 20:30	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 20:30	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 20:30	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 04:24	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1

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

Sample Description: WS-001(0.5-1.0)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158526
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 11:30 by HVA

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/13/2013 09:20

Highlands Ranch CO 80129

Reported: 08/20/2013 10:23

12001 SDG#: PEK51-15

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

Sample Description: WS-008(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158527
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 11:40 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12008 SDG#: PEK51-16

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-008(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158527
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 11:40 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12008 SDG#: PEK51-16

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	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.055	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.055	1
08357	Anthracene	120-12-7	0.015 J	0.011	0.055	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.055	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.055	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.055	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.055	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.055	1
08357	Chrysene	218-01-9	N.D.	0.011	0.055	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.055	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.055	1
08357	Fluorene	86-73-7	N.D.	0.011	0.055	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.055	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.055	1
08357	2-Methylnaphthalene	91-57-6	0.012 J	0.011	0.055	1
08357	Naphthalene	91-20-3	N.D.	0.033	0.055	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.055	1
08357	Pyrene	129-00-0	N.D.	0.011	0.055	1
The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.						
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	60.3	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0289	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1

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

Sample Description: WS-008(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158527
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 11:40 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12008 SDG#: PEK51-16

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	
01750	Calcium	7440-70-2	12.9	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	6.83	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0068 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.	1.9 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132261AA	08/14/2013 22:16	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 22:16	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 20:24	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 20:33	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 20:33	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 20:33	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 20:33	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 20:33	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 20:33	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 20:33	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 20:33	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 20:33	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 20:33	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 20:33	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 04:30	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1

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

Sample Description: WS-008(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158527
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 11:40 by HVA

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/13/2013 09:20

Highlands Ranch CO 80129

Reported: 08/20/2013 10:23

12008 SDG#: PEK51-16

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	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

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

Sample Description: WS-BKG-002(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158528
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12BKG SDG#: PEK51-17

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-BKG-002(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158528
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12BKG SDG#: PEK51-17

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.057	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.057	1
08357	Anthracene	120-12-7	N.D.	0.011	0.057	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.057	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.057	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.057	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.057	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.057	1
08357	Chrysene	218-01-9	N.D.	0.011	0.057	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.057	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.057	1
08357	Fluorene	86-73-7	N.D.	0.011	0.057	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.057	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.057	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.057	1
08357	Naphthalene	91-20-3	N.D.	0.034	0.057	1
08357	Phenanthrene	85-01-8	N.D.	0.034	0.057	1
08357	Pyrene	129-00-0	N.D.	0.011	0.057	1
The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.						
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	22.0	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	0.0358	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1

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

Sample Description: WS-BKG-002(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158528
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12BKG SDG#: PEK51-17

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
01750	Calcium	7440-70-2	5.57	0.0334	0.200	1
07051	Chromium	7440-47-3	0.0021 J	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	1.96	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0030 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.0033 J	0.0020	0.0050	1
SW-846 7470A						
			mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	1.9 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132271AA	08/15/2013 12:25	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132271AA	08/15/2013 12:25	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 20:53	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 20:37	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 20:37	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 20:37	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 20:37	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 20:37	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 20:37	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 20:37	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 20:37	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 20:37	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 20:37	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 20:37	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 04:32	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1

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

Sample Description: WS-BKG-002(Surface)081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158528
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/13/2013 09:20

Highlands Ranch CO 80129

Reported: 08/20/2013 10:23

12BKG SDG#: PEK51-17

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	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

Sample Description: WS-EB-28-081213 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158529
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12E28 SDG#: PEK51-18EB

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-28-081213 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158529
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12E28 SDG#: PEK51-18EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.056	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.056	1
08357	Anthracene	120-12-7	N.D.	0.011	0.056	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.056	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.056	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.056	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.056	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.056	1
08357	Chrysene	218-01-9	N.D.	0.011	0.056	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.056	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.056	1
08357	Fluorene	86-73-7	N.D.	0.011	0.056	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.056	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.056	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.056	1
08357	Naphthalene	91-20-3	0.11	0.034	0.056	1
08357	Phenanthrene	85-01-8	N.D.	0.034	0.056	1
08357	Pyrene	129-00-0	N.D.	0.011	0.056	1
The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.						
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	0.73	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	0.00042 J	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1

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

Sample Description: WS-EB-28-081213 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158529
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12E28 SDG#: PEK51-18EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
01750	Calcium	7440-70-2	0.226	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	0.0404 J	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132261AA	08/14/2013 13:36	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 13:36	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 21:23	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 20:41	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 20:41	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 20:41	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 20:41	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 20:41	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 20:41	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 20:41	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 20:41	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 20:41	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 20:41	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 20:41	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 04:34	Parker D Lindstrom	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1

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

Sample Description: WS-TB-122-081213 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158530
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013

ExxonMobil c/o Arcadis

Submitted: 08/13/2013 09:20

630 Plaza Drive, Suite 600

Reported: 08/20/2013 10:23

Highlands Ranch CO 80129

12122 SDG#: PEK51-19TB

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-122-081213 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158530
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12122 SDG#: PEK51-19TB

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	0.9	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	C132261AA	08/14/2013 15:28	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132261AA	08/14/2013 15:28	Kerri E Legerlotz	1

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

Sample Description: DUP-WS-70-081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158531
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12D70 SDG#: PEK51-20FD*

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

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

Sample Description: DUP-WS-70-081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158531
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12D70 SDG#: PEK51-20FD*

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO3	471-34-1	24.1	0.033	0.20

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

Sample Description: DUP-WS-70-081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158531
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 by HVA

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

Submitted: 08/13/2013 09:20

Reported: 08/20/2013 10:23

12D70 SDG#: PEK51-20FD*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0332	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.56	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.48	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0015 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
SW-846 7470A						
			mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	2.2 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	C132271AA	08/15/2013 12:48	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132271AA	08/15/2013 12:48	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13227WAJ026	08/17/2013 21:52	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13227WAJ026	08/15/2013 22:15	Nicholas W Shroyer	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132306256001	08/18/2013 05:28	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132251848005	08/17/2013 20:45	John P Hook	1
07046	Barium	SW-846 6010B	1	132251848005	08/17/2013 20:45	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132251848005	08/17/2013 20:45	John P Hook	1
01750	Calcium	SW-846 6010B	1	132251848005	08/17/2013 20:45	John P Hook	1
07051	Chromium	SW-846 6010B	1	132251848005	08/17/2013 20:45	John P Hook	1
07055	Lead	SW-846 6010B	1	132251848005	08/17/2013 20:45	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132251848005	08/17/2013 20:45	John P Hook	1
07061	Nickel	SW-846 6010B	1	132251848005	08/17/2013 20:45	John P Hook	1
07036	Selenium	SW-846 6010B	1	132251848005	08/17/2013 20:45	John P Hook	1
07066	Silver	SW-846 6010B	1	132251848005	08/17/2013 20:45	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132251848005	08/17/2013 20:45	John P Hook	1
00259	Mercury	SW-846 7470A	1	132265713002	08/16/2013 04:36	Parker D Lindstrom	1

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

Sample Description: DUP-WS-70-081213 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7158531
LL Group # 1410957
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/12/2013 by HVA

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 08/13/2013 09:20

Highlands Ranch CO 80129

Reported: 08/20/2013 10:23

12D70 SDG#: PEK51-20FD*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132251848005	08/14/2013 15:15	Kevin C Piaskowski	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132265713002	08/15/2013 12:54	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13231807902A	08/19/2013 16:55	Michelle L Lalli	1

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 08/20/13 at 10:23 AM

Group Number: 1410957

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: C132261AA	Sample number(s): 7158512-7158527, 7158529-7158530								
Acetone	N.D.	3.0	5.0	ug/l	101		73-135		
Allyl Chloride	N.D.	0.1	0.5	ug/l	77		61-130		
Benzene	N.D.	0.1	0.5	ug/l	97		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	101		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	106		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	105		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	113		63-132		
Bromomethane	N.D.	0.1	0.5	ug/l	122		38-146		
2-Butanone	N.D.	1.0	5.0	ug/l	87		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	96		80-120		
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	98		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	101		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	115		74-133		
Chlorobenzene	N.D.	0.1	0.5	ug/l	103		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	123		67-124		
Chloroform	N.D.	0.1	0.5	ug/l	106		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	80		55-135		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	101		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	101		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	101		57-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	108		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	105		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	106		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	107		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	103		80-112		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	84		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	98		80-120		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	112		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	103		80-123		
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	102		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	145		63-149		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	99		80-120		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	99		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	108		75-122		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	105		80-121		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	103		74-120		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	102		73-126		
Ethyl ether	N.D.	0.1	0.5	ug/l	126		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	98		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	101		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	105		61-125		

*- Outside of specification

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

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1410957

Reported: 08/20/13 at 10:23 AM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Isopropylbenzene	N.D.	0.1	0.5	ug/l	102		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	100		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	102		80-125		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	98		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	103		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	96		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	108		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	99		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	105		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	94		65-131		
Toluene	N.D.	0.1	0.5	ug/l	97		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	103		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	105		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	109		79-127		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	103		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	107		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	143*		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	106		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	101		80-120		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	101		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	88		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	99		80-120		

Batch number: C132271AA

Sample number(s): 7158528,7158531

Acetone	N.D.	3.0	5.0	ug/l	117		73-135		
Allyl Chloride	N.D.	0.1	0.5	ug/l	88		61-130		
Benzene	N.D.	0.1	0.5	ug/l	101		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	98		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	107		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	110		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	118		63-132		
Bromomethane	N.D.	0.1	0.5	ug/l	131		38-146		
2-Butanone	N.D.	1.0	5.0	ug/l	103		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	99		80-120		
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	99		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	100		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	118		74-133		
Chlorobenzene	N.D.	0.1	0.5	ug/l	104		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	122		67-124		
Chloroform	N.D.	0.1	0.5	ug/l	108		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	80		55-135		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	98		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	101		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	111		57-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	112		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	106		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	109		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	101		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	101		80-112		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	77		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	99		80-120		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	118		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	101		80-123		
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	103		80-120		

*- Outside of specification

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

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

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

Quality Control SummaryClient Name: ExxonMobil c/o Arcadis
Reported: 08/20/13 at 10:23 AM

Group Number: 1410957

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	106		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	131		63-149		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	106		80-120		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	102		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	110		75-122		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	107		80-121		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	110		74-120		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	107		73-126		
Ethyl ether	N.D.	0.1	0.5	ug/l	116		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	100		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	105		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	100		61-125		
Isopropylbenzene	N.D.	0.1	0.5	ug/l	101		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	98		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	102		80-125		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	107		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	105		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	98		80-120		
Styrene	N.D.	0.1	0.5	ug/l	103		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	108		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	104		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	104		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	102		65-131		
Toluene	N.D.	0.1	0.5	ug/l	99		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	99		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	101		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	109		79-127		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	104		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	109		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	136*		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	106		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	100		80-120		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	100		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	87		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	99		80-120		

Batch number: 13227WAJ026

Sample number(s): 7158512-7158529, 7158531

Acenaphthene	N.D.	0.010	0.050	ug/l	112	110	77-118	2	30
Acenaphthylene	N.D.	0.010	0.050	ug/l	113	116	80-123	2	30
Anthracene	N.D.	0.010	0.050	ug/l	116	116	78-123	0	30
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	103	102	73-127	1	30
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	104	106	72-120	2	30
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	101	107	79-136	5	30
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	92	97	64-130	5	30
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	103	111	73-131	7	30
Chrysene	N.D.	0.010	0.050	ug/l	104	104	76-125	0	30
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	87	94	58-131	8	30
Fluoranthene	N.D.	0.010	0.050	ug/l	114	112	79-124	2	30
Fluorene	N.D.	0.010	0.050	ug/l	105	104	74-115	1	30
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	86	92	62-130	7	30
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	117	110	80-126	7	30
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	113	105	81-124	7	30
Naphthalene	N.D.	0.030	0.050	ug/l	110	106	75-120	3	30
Phenanthrene	N.D.	0.030	0.050	ug/l	100	102	75-120	2	30
Pyrene	N.D.	0.010	0.050	ug/l	101	101	71-130	0	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

Group Number: 1410957

Reported: 08/20/13 at 10:23 AM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 132251848005	Sample number(s): 7158512-7158529,7158531								
Arsenic	N.D.	0.0068	0.0200	mg/l	97		90-113		
Barium	0.00062 J	0.00033	0.0050	mg/l	97		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	96		90-112		
Calcium	N.D.	0.0334	0.200	mg/l	97		90-110		
Chromium	N.D.	0.0016	0.0150	mg/l	97		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	95		88-110		
Magnesium	N.D.	0.0167	0.100	mg/l	95		90-110		
Nickel	N.D.	0.0015	0.0100	mg/l	99		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	93		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	109		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	98		90-110		
Batch number: 132265713002	Sample number(s): 7158512-7158529,7158531								
Mercury	N.D.	0.00006	0.00020	mg/l	101		80-120		
		0							
Batch number: 13231807902A	Sample number(s): 7158512-7158528,7158531								
HEM (oil & grease)	N.D.	1.4	5.0	mg/l	93	94	78-114	1	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: C132261AA	Sample number(s): 7158512-7158527,7158529-7158530 UNSPK: 7158512								
Acetone	102	83	57-163	20	30				
Allyl Chloride	75	86	67-139	13	30				
Benzene	95	99	87-126	4	30				
Bromobenzene	103	103	80-123	0	30				
Bromochloromethane	104	118	82-125	13	30				
Bromodichloromethane	109	109	82-133	0	30				
Bromoform	119	116	60-138	3	30				
Bromomethane	126	129	41-145	3	30				
2-Butanone	96	80	63-146	17	30				
n-Butylbenzene	102	103	83-131	1	30				
sec-Butylbenzene	103	104	84-128	1	30				
tert-Butylbenzene	102	110	84-135	7	30				
Carbon Tetrachloride	122	124	81-148	1	30				
Chlorobenzene	108	110	78-133	1	30				
Chloroethane	118	127	70-139	8	30				
Chloroform	106	108	86-136	2	30				
Chloromethane	79	83	55-152	5	30				
2-Chlorotoluene	103	104	81-120	1	30				
4-Chlorotoluene	104	106	82-119	2	30				
1,2-Dibromo-3-chloropropane	125	101	43-143	21	30				
Dibromochloromethane	114	111	79-125	3	30				
1,2-Dibromoethane	108	108	84-127	0	30				
Dibromomethane	106	106	83-126	0	30				
1,2-Dichlorobenzene	111	112	83-117	1	30				
1,3-Dichlorobenzene	106	108	81-118	2	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: 08/20/13 at 10:23 AM

Group Number: 1410957

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
1,4-Dichlorobenzene	106	106	79-120	0	30				
Dichlorodifluoromethane	84	83	28-136	1	30				
1,1-Dichloroethane	94	100	88-136	6	30				
1,2-Dichloroethane	113	114	82-135	1	30				
1,1-Dichloroethene	100	108	83-150	8	30				
cis-1,2-Dichloroethene	98	104	82-129	6	30				
trans-1,2-Dichloroethene	100	107	88-127	6	30				
Dichlorofluoromethane	139	150	59-176	8	30				
1,2-Dichloropropane	98	102	91-126	4	30				
1,3-Dichloropropane	100	102	80-127	1	30				
2,2-Dichloropropane	109	113	80-134	3	30				
1,1-Dichloropropene	105	109	86-139	4	30				
cis-1,3-Dichloropropene	102	105	74-132	3	30				
trans-1,3-Dichloropropene	105	106	71-128	1	30				
Ethyl ether	112	89	67-127	23	30				
Ethylbenzene	103	104	80-140	0	30				
Freon 113	107	107	87-158	1	30				
Hexachlorobutadiene	112	119	65-128	5	30				
Isopropylbenzene	109	109	81-133	0	30				
p-Isopropyltoluene	104	106	84-124	2	30				
Methyl Tertiary Butyl Ether	95	99	82-132	4	30				
4-Methyl-2-Pentanone	107	105	69-149	2	30				
Methylene Chloride	96	104	84-122	8	30				
n-Propylbenzene	99	101	79-131	2	30				
Styrene	107	107	63-151	0	30				
1,1,1,2-Tetrachloroethane	116	115	87-126	0	30				
1,1,2,2-Tetrachloroethane	105	107	75-131	2	30				
Tetrachloroethene	110	111	75-129	0	30				
Tetrahydrofuran	95	83	56-154	13	30				
Toluene	99	102	83-127	2	30				
1,2,3-Trichlorobenzene	107	117	73-125	9	30				
1,2,4-Trichlorobenzene	108	115	77-120	6	30				
1,1,1-Trichloroethane	113	113	85-140	0	30				
1,1,2-Trichloroethane	106	107	85-129	1	30				
Trichloroethene	109	112	85-131	2	30				
Trichlorofluoromethane	143	152	67-161	6	30				
1,2,3-Trichloropropane	117	111	76-120	6	30				
1,2,4-Trimethylbenzene	105	105	87-126	0	30				
1,3,5-Trimethylbenzene	104	106	89-129	2	30				
Vinyl Chloride	90	95	65-151	6	30				
Xylene (Total)	104	105	81-137	1	30				
Batch number: C132271AA Sample number(s): 7158528,7158531 UNSPK: 7158531									
Acetone	122	115	57-163	7	30				
Allyl Chloride	84	87	67-139	3	30				
Benzene	102	103	87-126	1	30				
Bromobenzene	105	105	80-123	0	30				
Bromochloromethane	106	105	82-125	1	30				
Bromodichloromethane	117	113	82-133	4	30				
Bromoform	127	117	60-138	8	30				
Bromomethane	129	126	41-145	2	30				
2-Butanone	107	101	63-146	6	30				

*- Outside of specification

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Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1410957

Reported: 08/20/13 at 10:23 AM

Sample Matrix Quality Control

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

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
n-Butylbenzene	104	106	83-131	2	30				
sec-Butylbenzene	105	107	84-128	2	30				
tert-Butylbenzene	106	108	84-135	2	30				
Carbon Tetrachloride	123	123	81-148	0	30				
Chlorobenzene	112	108	78-133	3	30				
Chloroethane	130	145*	70-139	11	30				
Chloroform	114	112	86-136	2	30				
Chloromethane	80	88	55-152	10	30				
2-Chlorotoluene	106	105	81-120	1	30				
4-Chlorotoluene	107	106	82-119	1	30				
1,2-Dibromo-3-chloropropane	117	106	43-143	9	30				
Dibromochloromethane	119	114	79-125	5	30				
1,2-Dibromoethane	117	111	84-127	5	30				
Dibromomethane	118	112	83-126	5	30				
1,2-Dichlorobenzene	113	110	83-117	3	30				
1,3-Dichlorobenzene	110	108	81-118	2	30				
1,4-Dichlorobenzene	109	107	79-120	2	30				
Dichlorodifluoromethane	77	79	28-136	2	30				
1,1-Dichloroethane	101	106	88-136	5	30				
1,2-Dichloroethane	124	121	82-135	2	30				
1,1-Dichloroethene	103	108	83-150	4	30				
cis-1,2-Dichloroethene	103	105	82-129	2	30				
trans-1,2-Dichloroethene	105	107	88-127	2	30				
Dichlorofluoromethane	130	154	59-176	16	30				
1,2-Dichloropropane	110	108	91-126	2	30				
1,3-Dichloropropane	112	106	80-127	6	30				
2,2-Dichloropropane	111	115	80-134	4	30				
1,1-Dichloropropene	110	114	86-139	3	30				
cis-1,3-Dichloropropene	106	106	74-132	1	30				
trans-1,3-Dichloropropene	111	109	71-128	2	30				
Ethyl ether	123	123	67-127	0	30				
Ethylbenzene	107	106	80-140	1	30				
Freon 113	107	108	87-158	1	30				
Hexachlorobutadiene	103	105	65-128	2	30				
Isopropylbenzene	109	108	81-133	1	30				
p-Isopropyltoluene	105	106	84-124	1	30				
Methyl Tertiary Butyl Ether	98	101	82-132	3	30				
4-Methyl-2-Pentanone	119	115	69-149	3	30				
Methylene Chloride	102	105	84-122	3	30				
n-Propylbenzene	104	105	79-131	1	30				
Styrene	112	108	63-151	4	30				
1,1,1,2-Tetrachloroethane	119	114	87-126	4	30				
1,1,2,2-Tetrachloroethane	115	111	75-131	4	30				
Tetrachloroethene	109	108	75-129	0	30				
Tetrahydrofuran	101	98	56-154	3	30				
Toluene	105	105	83-127	0	30				
1,2,3-Trichlorobenzene	104	105	73-125	0	30				
1,2,4-Trichlorobenzene	105	104	77-120	1	30				
1,1,1-Trichloroethane	113	114	85-140	1	30				
1,1,2-Trichloroethane	115	109	85-129	5	30				
Trichloroethene	113	114	85-131	2	30				
Trichlorofluoromethane	144	151	67-161	5	30				

*- Outside of specification

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Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1410957

Reported: 08/20/13 at 10:23 AM

Sample Matrix Quality Control

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

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup</u> <u>RPD</u> <u>Max</u>
1,2,3-Trichloropropane	122*	115	76-120	7	30				
1,2,4-Trimethylbenzene	107	108	87-126	1	30				
1,3,5-Trimethylbenzene	107	106	89-129	1	30				
Vinyl Chloride	88	100	65-151	13	30				
Xylene (Total)	107	105	81-137	2	30				

Batch number: 132251848005	Sample number(s): 7158512-7158529,7158531 UNSPK: 7158523 BKG: 7158523								
Arsenic	102	102	81-123	0	20	N.D.	N.D.	0 (1)	20
Barium	99	99	78-118	0	20	0.0314	0.0312	1	20
Cadmium	98	99	83-116	1	20	N.D.	N.D.	0 (1)	20
Calcium	97	96	81-118	0	20	6.43	6.44	0	20
Chromium	98	98	81-120	1	20	N.D.	N.D.	0 (1)	20
Lead	97	99	75-125	2	20	N.D.	N.D.	0 (1)	20
Magnesium	96	95	75-125	1	20	2.91	2.92	0	20
Nickel	101	102	86-115	1	20	N.D.	N.D.	0 (1)	20
Selenium	94	97	75-125	3	20	N.D.	N.D.	0 (1)	20
Silver	113	112	75-125	1	20	N.D.	N.D.	0 (1)	20
Vanadium	100	100	90-111	0	20	N.D.	N.D.	0 (1)	20

Batch number: 132265713002	Sample number(s): 7158512-7158529,7158531 UNSPK: 7158512 BKG: 7158512								
Mercury	100	99	80-120	1	20	N.D.	N.D.	0 (1)	20

Batch number: 13231807902A	Sample number(s): 7158512-7158528,7158531 UNSPK: 7158512								
HEM (oil & grease)	84		78-114						

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: C132261AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7158512	107	101	97	101
7158513	107	103	96	99
7158514	107	103	97	100
7158515	106	102	97	99
7158516	109	108	96	101
7158517	108	102	97	101
7158518	107	103	97	101
7158519	108	102	96	99
7158520	108	104	96	100
7158521	109	105	96	100
7158522	108	102	96	100
7158523	108	104	96	101
7158524	110	104	96	99
7158525	108	103	97	100
7158526	110	106	96	100

*- Outside of specification

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Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1410957

Reported: 08/20/13 at 10:23 AM

Surrogate Quality Control

7158527	110	102	96	100
7158529	106	103	97	101
7158530	109	104	97	99
Blank	108	103	97	100
LCS	104	99	97	102
MS	105	100	98	104
MSD	105	102	98	104

Limits:	77-114	74-113	77-110	78-110
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Analysis Name: BTEX 25-ml purge

Batch number: C132271AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7158528	109	104	97	100
7158531	102	95	99	101
Blank	106	103	96	101
LCS	106	106	98	104
MS	106	103	99	105
MSD	105	102	99	104

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

Batch number: 13227WAJ026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7158512	97	50*	115
7158513	94	40*	106
7158514	104	51*	109
7158515	97	51*	110
7158516	100	55*	105
7158517	98	56*	106
7158518	105	51*	111
7158519	103	53*	110
7158520	102	46*	108
7158521	98	44*	112
7158522	95	44*	112
7158523	94	60*	110
7158524	97	44*	108
7158525	83	59*	94
7158526	98	76	117
7158527	87	84	109
7158528	85	64	96
7158529	106	103	110
7158531	100	58*	108
Blank	101	110	113
LCS	106	104	113
LCSD	105	110	110

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

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

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

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

ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only
Group # 1410957 Sample # 7158512-31
Instructions on reverse side correspond with circled numbers.

1 of 2

1 Client Information				4 Matrix				5 Analyses Requested												SCR#:																											
Facility #/SID <u>Mayflower Pipeline Incident</u>				☐ Sediment ☐ Potable ☐ Ground ☐ NPDES ☒ Surface ☐ Water ☐ Oil ☐ Air	Preservation Code												Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other																														
Site Address <u>Mayflower, AR</u>					<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>4</td><td></td><td>N</td><td>H</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td colspan="4" style="vertical-align: top;"> <u>VOCs B260B</u> <u>PAHs B270SIM</u> <u>PCRA Metals Ni, V, Cr, Pb, Cu, Mg</u> <u>Diss Metals</u> <u>HEM Oil & Grease</u> </td> <td colspan="11"></td> </tr> </table>														4		N	H													<u>VOCs B260B</u> <u>PAHs B270SIM</u> <u>PCRA Metals Ni, V, Cr, Pb, Cu, Mg</u> <u>Diss Metals</u> <u>HEM Oil & Grease</u>												
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ExxonMobil PM <u>Scott Bushroe</u>																																															
Consultant/Office <u>Arcadis</u>																																															
Consultant PM <u>Steve Barrick</u>																																															
Consultant Phone # <u>919 202 6799</u>																																															
Sampler <u>H. Van Allen / M. Long</u>																																															
2 Sample Identification		Collected		3 Grab Composite																																											
Date	Time	Grab	Composite	Soil	Water	Oil	Total # of Containers													6 Remarks <u>Lab to filter & preserve diss metals upon receipt</u>																											
<u>WS-014(1.5-2.0)081213</u>	<u>8/12/13</u>	<u>820</u>	<u>X</u>		<u>X</u>		<u>9</u>	<u>0</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>																																		
<u>WS-014(5.5-6.0)081213</u>		<u>830</u>	<u>X</u>		<u>X</u>		<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>																																		
<u>WS-012(1.5-2.0)081213</u>		<u>840</u>	<u>X</u>		<u>X</u>		<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>																																		
<u>WS-012(5.0-5.5)081213</u>		<u>850</u>	<u>X</u>		<u>X</u>		<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>																																		
<u>WS-010(1.5-2.0)081213</u>		<u>900</u>	<u>X</u>		<u>X</u>		<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>																																		
<u>WS-010(3.5-4.0)081213</u>		<u>910</u>	<u>X</u>		<u>X</u>		<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>																																		
<u>WS-006(0.5-1.0)081213</u>		<u>930</u>	<u>X</u>		<u>X</u>		<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>																																		
<u>WS-005(Surface)081213</u>		<u>950</u>	<u>X</u>		<u>X</u>		<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>																																		
<u>WS-011(1.5-2.0)081213</u>		<u>1040</u>	<u>X</u>		<u>X</u>		<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>																																		
<u>WS-011(5.0-5.5)081213</u>		<u>1050</u>	<u>X</u>		<u>X</u>		<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>																																		
<u>WS-003(Surface)081213</u>		<u>1100</u>	<u>X</u>		<u>X</u>		<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>																																		
<u>WS-002(Surface)081213</u>		<u>1000</u>	<u>X</u>		<u>X</u>		<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>																																		
7 Turnaround Time Requested (TAT) (please circle)				Relinquished by				Date		Time		Received by		Date		Time																															
Standard <u>5 day</u> 4 day				<u>H. Van Allen</u>				<u>8/12/13</u>		<u>1600</u>																																					
72 hour 48 hour 24 hour																																															
8 Data Package (circle if required)				Relinquished by Commercial Carrier				Date		Time		Received by		Date		Time																															
Type I - Full				Locus EIM (default)				UPS <u>X</u>		FedEx		Other		<u>CSH</u>		<u>8/13/13</u>																															
Type VI (Raw Data)				Other																																											
NJ Reduced																																															
Other																																															
Temperature Upon Receipt <u>0.5-4.7</u> °C								Custody Seals Intact? <u>Yes</u> No																																							

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

Acct. # 14739

20f2

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Environmental Sample Administration 1410957
Receipt Documentation LogClient/Project: MayflowerShipping Container Sealed: YES NODate of Receipt: 8/13/13Custody Seal Present *: YES NOTime of Receipt: 0920* Custody seal was intact unless otherwise noted in the
discrepancy sectionSource Code: 60-1Package: Chilled Not Chilled

Temperature of Shipping Containers

Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT121	1.3	TB	WI	Y	B	
2		4.7					
3		1.2					
4		0.5					
5		2.3					
6		0.5					

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: CEshl 3647 Date/Time: 8/13/13 1000

Issued by Dept. 6042 Management

2174.06

Environmental Sample Administration
Receipt Documentation Log

1410957

Client/Project: MayflowerShipping Container Sealed: YES NODate of Receipt: 8/13/13Custody Seal Present *: YES NOTime of Receipt: 0920* Custody seal was intact unless otherwise noted in the
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1	DT121	0.7	TB	WI	Y	B	
2							
3							
4							
5							
6							

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: Cash 3647 Date/Time: 8/13/13 1000

Issued by Dept. 6042 Management

2174.06

Explanation of Symbols and Abbreviations

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

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

Data Qualifiers:

C – result confirmed by reanalysis.

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

U.S. EPA CLP Data Qualifiers:

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

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

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

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

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

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