

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

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

September 16, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 09/07/2013

Group Number: 1417160

SDG: PEL30

PO Number: B0086003.1301

State of Sample Origin: AR

Client Sample Description

WS-014(1.5-2.0)090613 Grab Surface Water
WS-014(5.5-6.0)090613 Grab Surface Water
WS-012(1.5-2.0)090613 Grab Surface Water
WS-012(5.0-5.5)090613 Grab Surface Water
WS-010(1.5-2.0)090613 Grab Surface Water
WS-010(3.5-4.0)090613 Grab Surface Water
WS-006(0.5-1.0)090613 Grab Surface Water
WS-005(Surface)090613 Grab Surface Water
WS-002(Surface)090613 Grab Surface Water
WS-011(1.5-2.0)090613 Grab Surface Water
WS-011(5.0-5.5)090613 Grab Surface Water
WS-018(Surface)090613 Grab Surface Water
WS-003(Surface)090613 Grab Surface Water
WS-007(0.5-1.0)090613 Grab Surface Water
WS-001(0.5-1.0)090613 Grab Surface Water
WS-EB-53-090613 Grab Water
WS-TB-142-090613 Water
DUP-WS-083-090613 Grab Surface Water

Lancaster Labs (LL)

7189248
7189249
7189250
7189251
7189252
7189253
7189254
7189255
7189256
7189257
7189258
7189259
7189260
7189261
7189262
7189263
7189264
7189265

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

ELECTRONIC COPY TO

ARCADIS

Attn: Stephen Barrick

ELECTRONIC COPY TO

ARCADIS

Attn: Lyndi Mott

ELECTRONIC COPY TO

ExxonMobil

Attn: Michael J. Firth

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

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1417160

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 #: C132521AA (Sample number(s): 7189248-7189255 UNSPK: 7189249)

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: Methyl Tertiary Butyl Ether, 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

SW-846 8270C SIM, GC/MS Semivolatiles

Batch #: 13252WAA026 (Sample number(s): 7189248-7189263, 7189265)

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7189249, 7189252, 7189257, 7189258, 7189259, 7189265

Sample #s: 7189248

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

Sample #s: 7189250, 7189251, 7189253, 7189254, 7189255, 7189256, 7189260, 7189261, 7189262, 7189263

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

Sample #s: 7189249, 7189252, 7189257, 7189258, 7189259, 7189265

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)090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189248**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 09:35 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

15-14 SDG#: PEL30-01

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)090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189248**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 09:35 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

15-14 SDG#: PEL30-01

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	0.055	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.

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	30.7	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0934	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-014(1.5-2.0)090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189248**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 09:35 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

15-14 SDG#: PEL30-01

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	
01750	Calcium	7440-70-2	7.11	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	3.15	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	C132521AA	09/09/2013 11:52	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132521AA	09/09/2013 11:52	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13252WAA026	09/10/2013 16:17	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13252WAA026	09/09/2013 15:30	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132546256001	09/11/2013 05:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132501848011	09/10/2013 18:51	John P Hook	1
07046	Barium	SW-846 6010B	1	132501848011	09/10/2013 18:51	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132501848011	09/10/2013 18:51	John P Hook	1
01750	Calcium	SW-846 6010B	1	132501848011	09/10/2013 18:51	John P Hook	1
07051	Chromium	SW-846 6010B	1	132501848011	09/10/2013 18:51	John P Hook	1
07055	Lead	SW-846 6010B	1	132501848011	09/10/2013 18:51	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132501848011	09/10/2013 18:51	John P Hook	1
07061	Nickel	SW-846 6010B	1	132501848011	09/10/2013 18:51	John P Hook	1
07036	Selenium	SW-846 6010B	1	132501848011	09/10/2013 18:51	John P Hook	1
07066	Silver	SW-846 6010B	1	132501848011	09/10/2013 18:51	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132501848011	09/10/2013 18:51	John P Hook	1
00259	Mercury	SW-846 7470A	1	132505713009	09/11/2013 06:53	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132501848011	09/10/2013 09:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132505713009	09/10/2013 16:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13255807902A	09/12/2013 10:44	Yolunder Y Bunch	1

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

Sample Description: **WS-014(5.5-6.0)090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189249**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 09:45 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

14-55 SDG#: PEL30-02

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)090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189249**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 09:45 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

14-55 SDG#: PEL30-02

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	30.6	0.033	0.20	1

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

Sample Description: **WS-014(5.5-6.0)090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189249**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 09:45 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

14-55 SDG#: PEL30-02

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	0.0877	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.08	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.13	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	C132521AA	09/09/2013 12:14	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132521AA	09/09/2013 12:14	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13252WAA026	09/10/2013 16:47	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13252WAA026	09/09/2013 15:30	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132546256001	09/11/2013 05:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132501848011	09/10/2013 18:55	John P Hook	1
07046	Barium	SW-846 6010B	1	132501848011	09/10/2013 18:55	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132501848011	09/10/2013 18:55	John P Hook	1
01750	Calcium	SW-846 6010B	1	132501848011	09/10/2013 18:55	John P Hook	1
07051	Chromium	SW-846 6010B	1	132501848011	09/10/2013 18:55	John P Hook	1
07055	Lead	SW-846 6010B	1	132501848011	09/10/2013 18:55	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132501848011	09/10/2013 18:55	John P Hook	1
07061	Nickel	SW-846 6010B	1	132501848011	09/10/2013 18:55	John P Hook	1
07036	Selenium	SW-846 6010B	1	132501848011	09/10/2013 18:55	John P Hook	1
07066	Silver	SW-846 6010B	1	132501848011	09/10/2013 18:55	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132501848011	09/10/2013 18:55	John P Hook	1
00259	Mercury	SW-846 7470A	1	132505713009	09/11/2013 06:55	Damary Valentin	1

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

Sample Description: WS-014(5.5-6.0)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189249
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 09:45 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

14-55 SDG#: PEL30-02

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	132501848011	09/10/2013 09:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132505713009	09/10/2013 16:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13255807902A	09/12/2013 10:44	Yolunder Y Bunch	1

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

Sample Description: **WS-012(1.5-2.0)090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189250**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 10:05 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1215 SDG#: PEL30-03

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)090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189250**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 10:05 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1215 SDG#: PEL30-03

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.

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	30.0	0.033	0.20	1
	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	0.0491	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-012(1.5-2.0)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189250
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 10:05 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1215 SDG#: PEL30-03

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	
01750	Calcium	7440-70-2	6.94	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.07	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132521AA	09/09/2013 12:36	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132521AA	09/09/2013 12:36	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13252WAA026	09/10/2013 17:17	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13252WAA026	09/09/2013 15:30	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132546256001	09/11/2013 05:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132501848011	09/10/2013 19:06	John P Hook	1
07046	Barium	SW-846 6010B	1	132501848011	09/10/2013 19:06	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132501848011	09/10/2013 19:06	John P Hook	1
01750	Calcium	SW-846 6010B	1	132501848011	09/10/2013 19:06	John P Hook	1
07051	Chromium	SW-846 6010B	1	132501848011	09/10/2013 19:06	John P Hook	1
07055	Lead	SW-846 6010B	1	132501848011	09/10/2013 19:06	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132501848011	09/10/2013 19:06	John P Hook	1
07061	Nickel	SW-846 6010B	1	132501848011	09/10/2013 19:06	John P Hook	1
07036	Selenium	SW-846 6010B	1	132501848011	09/10/2013 19:06	John P Hook	1
07066	Silver	SW-846 6010B	1	132501848011	09/10/2013 19:06	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132501848011	09/10/2013 19:06	John P Hook	1
00259	Mercury	SW-846 7470A	1	132505713009	09/11/2013 06:57	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132501848011	09/10/2013 09:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132505713009	09/10/2013 16:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13255807902A	09/12/2013 10:44	Yolunder Y Bunch	1

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

Sample Description: WS-012(5.0-5.5)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189251
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 10:15 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1250 SDG#: PEL30-04

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)090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189251**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 10:15 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1250 SDG#: PEL30-04

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

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	29.4	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0511	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-012(5.0-5.5)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189251
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 10:15 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1250 SDG#: PEL30-04

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	
01750	Calcium	7440-70-2	6.80	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.01	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	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	C132521AA	09/09/2013 18:31	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132521AA	09/09/2013 18:31	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13252WAA026	09/10/2013 17:46	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13252WAA026	09/09/2013 15:30	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132546256001	09/11/2013 05:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132501848011	09/10/2013 19:10	John P Hook	1
07046	Barium	SW-846 6010B	1	132501848011	09/10/2013 19:10	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132501848011	09/10/2013 19:10	John P Hook	1
01750	Calcium	SW-846 6010B	1	132501848011	09/10/2013 19:10	John P Hook	1
07051	Chromium	SW-846 6010B	1	132501848011	09/10/2013 19:10	John P Hook	1
07055	Lead	SW-846 6010B	1	132501848011	09/10/2013 19:10	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132501848011	09/10/2013 19:10	John P Hook	1
07061	Nickel	SW-846 6010B	1	132501848011	09/10/2013 19:10	John P Hook	1
07036	Selenium	SW-846 6010B	1	132501848011	09/10/2013 19:10	John P Hook	1
07066	Silver	SW-846 6010B	1	132501848011	09/10/2013 19:10	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132501848011	09/10/2013 19:10	John P Hook	1
00259	Mercury	SW-846 7470A	1	132505713009	09/11/2013 07:05	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132501848011	09/10/2013 09:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132505713009	09/10/2013 16:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13255807902A	09/12/2013 10:44	Yolunder Y Bunch	1

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

Sample Description: WS-010(1.5-2.0)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189252
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 10:30 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1015 SDG#: PEL30-05

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

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

Sample Description: **WS-010(1.5-2.0)090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189252**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 10:30 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1015 SDG#: PEL30-05

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

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

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

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

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

Sample Description: WS-010(1.5-2.0)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189252
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 10:30 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1015 SDG#: PEL30-05

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	0.0531	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.83	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.04	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132521AA	09/09/2013 18:53	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132521AA	09/09/2013 18:53	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13252WAA026	09/10/2013 18:16	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13252WAA026	09/09/2013 15:30	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132546256001	09/11/2013 05:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132501848011	09/10/2013 19:14	John P Hook	1
07046	Barium	SW-846 6010B	1	132501848011	09/10/2013 19:14	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132501848011	09/10/2013 19:14	John P Hook	1
01750	Calcium	SW-846 6010B	1	132501848011	09/10/2013 19:14	John P Hook	1
07051	Chromium	SW-846 6010B	1	132501848011	09/10/2013 19:14	John P Hook	1
07055	Lead	SW-846 6010B	1	132501848011	09/10/2013 19:14	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132501848011	09/10/2013 19:14	John P Hook	1
07061	Nickel	SW-846 6010B	1	132501848011	09/10/2013 19:14	John P Hook	1
07036	Selenium	SW-846 6010B	1	132501848011	09/10/2013 19:14	John P Hook	1
07066	Silver	SW-846 6010B	1	132501848011	09/10/2013 19:14	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132501848011	09/10/2013 19:14	John P Hook	1
00259	Mercury	SW-846 7470A	1	132505713009	09/11/2013 07:08	Damary Valentin	1

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

Sample Description: WS-010(1.5-2.0)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189252
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 10:30 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1015 SDG#: PEL30-05

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	132501848011	09/10/2013 09:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132505713009	09/10/2013 16:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13255807902A	09/12/2013 10:44	Yolunder Y Bunch	1

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

Sample Description: WS-010(3.5-4.0)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189253
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 10:40 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1035 SDG#: PEL30-06

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)090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189253**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 10:40 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1035 SDG#: PEL30-06

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.

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	30.8	0.033	0.20	1
	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	0.0755	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-010(3.5-4.0)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189253
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 10:40 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1035 SDG#: PEL30-06

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	
01750	Calcium	7440-70-2	7.10	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.17	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	C132521AA	09/09/2013 19:15	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132521AA	09/09/2013 19:15	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13252WAA026	09/10/2013 18:45	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13252WAA026	09/09/2013 15:30	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132546256001	09/11/2013 05:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132501848011	09/10/2013 19:17	John P Hook	1
07046	Barium	SW-846 6010B	1	132501848011	09/10/2013 19:17	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132501848011	09/10/2013 19:17	John P Hook	1
01750	Calcium	SW-846 6010B	1	132501848011	09/10/2013 19:17	John P Hook	1
07051	Chromium	SW-846 6010B	1	132501848011	09/10/2013 19:17	John P Hook	1
07055	Lead	SW-846 6010B	1	132501848011	09/10/2013 19:17	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132501848011	09/10/2013 19:17	John P Hook	1
07061	Nickel	SW-846 6010B	1	132501848011	09/10/2013 19:17	John P Hook	1
07036	Selenium	SW-846 6010B	1	132501848011	09/10/2013 19:17	John P Hook	1
07066	Silver	SW-846 6010B	1	132501848011	09/10/2013 19:17	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132501848011	09/10/2013 19:17	John P Hook	1
00259	Mercury	SW-846 7470A	1	132505713009	09/11/2013 07:10	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132501848011	09/10/2013 09:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132505713009	09/10/2013 16:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13255807902A	09/12/2013 10:44	Yolunder Y Bunch	1

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

Sample Description: WS-006(0.5-1.0)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189254
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 11:00 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-0605 SDG#: PEL30-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
		purge				
02898	Acetone	67-64-1	3.2 J	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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

Sample Description: **WS-006(0.5-1.0)090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189254**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 11:00 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-0605 SDG#: PEL30-07

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	30.4	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0683	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-006(0.5-1.0)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189254
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 11:00 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-0605 SDG#: PEL30-07

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	
01750	Calcium	7440-70-2	7.02	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.11	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	3.1 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132521AA	09/09/2013 19:37	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132521AA	09/09/2013 19:37	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13252WAA026	09/10/2013 19:15	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13252WAA026	09/09/2013 15:30	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132546256001	09/11/2013 05:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132501848011	09/10/2013 19:21	John P Hook	1
07046	Barium	SW-846 6010B	1	132501848011	09/10/2013 19:21	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132501848011	09/10/2013 19:21	John P Hook	1
01750	Calcium	SW-846 6010B	1	132501848011	09/10/2013 19:21	John P Hook	1
07051	Chromium	SW-846 6010B	1	132501848011	09/10/2013 19:21	John P Hook	1
07055	Lead	SW-846 6010B	1	132501848011	09/10/2013 19:21	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132501848011	09/10/2013 19:21	John P Hook	1
07061	Nickel	SW-846 6010B	1	132501848011	09/10/2013 19:21	John P Hook	1
07036	Selenium	SW-846 6010B	1	132501848011	09/10/2013 19:21	John P Hook	1
07066	Silver	SW-846 6010B	1	132501848011	09/10/2013 19:21	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132501848011	09/10/2013 19:21	John P Hook	1
00259	Mercury	SW-846 7470A	1	132505713009	09/11/2013 07:16	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132501848011	09/10/2013 09:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132505713009	09/10/2013 16:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13255807902A	09/12/2013 10:44	Yolunder Y Bunch	1

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

Sample Description: **WS-005 (Surface) 090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189255**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 11:30 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-05S- SDG#: PEL30-08

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) 090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189255**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 11:30 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-05S- SDG#: PEL30-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.055	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.

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	31.1	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0423	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-005 (Surface) 090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189255
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 11:30 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-05S- SDG#: PEL30-08

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	
01750	Calcium	7440-70-2	7.47	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.02	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	C132521AA	09/09/2013 20:00	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132521AA	09/09/2013 20:00	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13252WAA026	09/10/2013 19:44	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13252WAA026	09/09/2013 15:30	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132546256001	09/11/2013 05:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132501848011	09/10/2013 19:25	John P Hook	1
07046	Barium	SW-846 6010B	1	132501848011	09/10/2013 19:25	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132501848011	09/10/2013 19:25	John P Hook	1
01750	Calcium	SW-846 6010B	1	132501848011	09/10/2013 19:25	John P Hook	1
07051	Chromium	SW-846 6010B	1	132501848011	09/10/2013 19:25	John P Hook	1
07055	Lead	SW-846 6010B	1	132501848011	09/10/2013 19:25	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132501848011	09/10/2013 19:25	John P Hook	1
07061	Nickel	SW-846 6010B	1	132501848011	09/10/2013 19:25	John P Hook	1
07036	Selenium	SW-846 6010B	1	132501848011	09/10/2013 19:25	John P Hook	1
07066	Silver	SW-846 6010B	1	132501848011	09/10/2013 19:25	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132501848011	09/10/2013 19:25	John P Hook	1
00259	Mercury	SW-846 7470A	1	132505713009	09/11/2013 07:18	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132501848011	09/10/2013 09:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132505713009	09/10/2013 16:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13255807902A	09/12/2013 10:44	Yolunder Y Bunch	1

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

Sample Description: WS-002 (Surface) 090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189256
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 11:50 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-02S- SDG#: PEL30-09

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

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

Sample Description: **WS-002 (Surface) 090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189256**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 11:50 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-02S- SDG#: PEL30-09

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.

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	29.9	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0345	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-002 (Surface) 090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189256
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 11:50 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-02S- SDG#: PEL30-09

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	
01750	Calcium	7440-70-2	6.90	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.07	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132522AA	09/09/2013 22:53	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132522AA	09/09/2013 22:53	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13252WAA026	09/10/2013 20:14	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13252WAA026	09/09/2013 15:30	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132546256001	09/11/2013 05:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132501848011	09/10/2013 19:29	John P Hook	1
07046	Barium	SW-846 6010B	1	132501848011	09/10/2013 19:29	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132501848011	09/10/2013 19:29	John P Hook	1
01750	Calcium	SW-846 6010B	1	132501848011	09/10/2013 19:29	John P Hook	1
07051	Chromium	SW-846 6010B	1	132501848011	09/10/2013 19:29	John P Hook	1
07055	Lead	SW-846 6010B	1	132501848011	09/10/2013 19:29	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132501848011	09/10/2013 19:29	John P Hook	1
07061	Nickel	SW-846 6010B	1	132501848011	09/10/2013 19:29	John P Hook	1
07036	Selenium	SW-846 6010B	1	132501848011	09/10/2013 19:29	John P Hook	1
07066	Silver	SW-846 6010B	1	132501848011	09/10/2013 19:29	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132501848011	09/10/2013 19:29	John P Hook	1
00259	Mercury	SW-846 7470A	1	132505713009	09/11/2013 07:20	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132501848011	09/10/2013 09:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132505713009	09/10/2013 16:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13255807902A	09/12/2013 10:44	Yolunder Y Bunch	1

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

Sample Description: WS-011(1.5-2.0)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189257
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 12:00 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1115 SDG#: PEL30-10

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

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

Sample Description: **WS-011(1.5-2.0)090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189257**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 12:00 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1115 SDG#: PEL30-10

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 CaCO3	471-34-1	30.6	0.033	0.20	1

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

Sample Description: WS-011(1.5-2.0)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189257
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 12:00 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1115 SDG#: PEL30-10

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	0.0590	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.99	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	3.20	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	C132522AA	09/10/2013 01:08	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132522AA	09/10/2013 01:08	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13252WAA026	09/10/2013 20:43	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13252WAA026	09/09/2013 15:30	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132546256001	09/11/2013 05:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132501848011	09/10/2013 19:32	John P Hook	1
07046	Barium	SW-846 6010B	1	132501848011	09/10/2013 19:32	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132501848011	09/10/2013 19:32	John P Hook	1
01750	Calcium	SW-846 6010B	1	132501848011	09/10/2013 19:32	John P Hook	1
07051	Chromium	SW-846 6010B	1	132501848011	09/10/2013 19:32	John P Hook	1
07055	Lead	SW-846 6010B	1	132501848011	09/10/2013 19:32	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132501848011	09/10/2013 19:32	John P Hook	1
07061	Nickel	SW-846 6010B	1	132501848011	09/10/2013 19:32	John P Hook	1
07036	Selenium	SW-846 6010B	1	132501848011	09/10/2013 19:32	John P Hook	1
07066	Silver	SW-846 6010B	1	132501848011	09/10/2013 19:32	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132501848011	09/10/2013 19:32	John P Hook	1
00259	Mercury	SW-846 7470A	1	132505713009	09/11/2013 07:22	Damary Valentin	1

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

Sample Description: WS-011(1.5-2.0)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189257
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 12:00 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1115 SDG#: PEL30-10

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	132501848011	09/10/2013 09:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132505713009	09/10/2013 16:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13255807902A	09/12/2013 10:44	Yolunder Y Bunch	1

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

Sample Description: **WS-011(5.0-5.5)090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189258**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 12:10 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1150 SDG#: PEL30-11

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

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

Sample Description: **WS-011(5.0-5.5)090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189258**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 12:10 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1150 SDG#: PEL30-11

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

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	31.1	0.033	0.20	1

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

Sample Description: WS-011(5.0-5.5)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189258
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 12:10 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1150 SDG#: PEL30-11

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	0.0712	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	7.06	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.26	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	C132522AA	09/10/2013 01:30	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132522AA	09/10/2013 01:30	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13252WAA026	09/10/2013 21:13	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13252WAA026	09/09/2013 15:30	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132546256001	09/11/2013 05:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132501848011	09/10/2013 18:29	John P Hook	1
07046	Barium	SW-846 6010B	1	132501848011	09/10/2013 18:29	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132501848011	09/10/2013 18:29	John P Hook	1
01750	Calcium	SW-846 6010B	1	132501848011	09/10/2013 18:29	John P Hook	1
07051	Chromium	SW-846 6010B	1	132501848011	09/10/2013 18:29	John P Hook	1
07055	Lead	SW-846 6010B	1	132501848011	09/10/2013 18:29	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132501848011	09/10/2013 18:29	John P Hook	1
07061	Nickel	SW-846 6010B	1	132501848011	09/10/2013 18:29	John P Hook	1
07036	Selenium	SW-846 6010B	1	132501848011	09/10/2013 18:29	John P Hook	1
07066	Silver	SW-846 6010B	1	132501848011	09/10/2013 18:29	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132501848011	09/10/2013 18:29	John P Hook	1
00259	Mercury	SW-846 7470A	1	132505713009	09/11/2013 07:24	Damary Valentin	1

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

Sample Description: WS-011(5.0-5.5)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189258
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 12:10 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-1150 SDG#: PEL30-11

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	132501848011	09/10/2013 09:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132505713009	09/10/2013 16:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13255807902A	09/12/2013 10:44	Yolunder Y Bunch	1

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

Sample Description: **WS-018 (Surface) 090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189259**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 12:30 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

--18S SDG#: PEL30-12

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-018 (Surface) 090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189259**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 12:30 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

--18S SDG#: PEL30-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.056	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	30.3	0.033	0.20	1

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

Sample Description: WS-018 (Surface) 090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189259
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 12:30 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

--18S SDG#: PEL30-12

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	0.0953	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.93	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.17	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	C132522AA	09/10/2013 01:52	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132522AA	09/10/2013 01:52	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13252WAA026	09/10/2013 21:43	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13252WAA026	09/09/2013 15:30	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132546256001	09/11/2013 05:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132501848011	09/10/2013 19:36	John P Hook	1
07046	Barium	SW-846 6010B	1	132501848011	09/10/2013 19:36	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132501848011	09/10/2013 19:36	John P Hook	1
01750	Calcium	SW-846 6010B	1	132501848011	09/10/2013 19:36	John P Hook	1
07051	Chromium	SW-846 6010B	1	132501848011	09/10/2013 19:36	John P Hook	1
07055	Lead	SW-846 6010B	1	132501848011	09/10/2013 19:36	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132501848011	09/10/2013 19:36	John P Hook	1
07061	Nickel	SW-846 6010B	1	132501848011	09/10/2013 19:36	John P Hook	1
07036	Selenium	SW-846 6010B	1	132501848011	09/10/2013 19:36	John P Hook	1
07066	Silver	SW-846 6010B	1	132501848011	09/10/2013 19:36	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132501848011	09/10/2013 19:36	John P Hook	1
00259	Mercury	SW-846 7470A	1	132505713009	09/11/2013 07:26	Damary Valentin	1

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

Sample Description: WS-018 (Surface) 090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189259
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 12:30 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

--18S SDG#: PEL30-12

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	132501848011	09/10/2013 09:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132505713009	09/10/2013 16:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13255807902A	09/12/2013 10:44	Yolunder Y Bunch	1

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

Sample Description: WS-003 (Surface) 090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189260
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 12:40 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-03S- SDG#: PEL30-13

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

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

Sample Description: **WS-003 (Surface) 090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189260**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 12:40 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-03S- SDG#: PEL30-13

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	29.8	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0421	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

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: WS-003 (Surface) 090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189260
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 12:40 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-03S- SDG#: PEL30-13

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	
01750	Calcium	7440-70-2	6.79	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.12	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132522AA	09/10/2013 02:14	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132522AA	09/10/2013 02:14	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13252WAA026	09/10/2013 22:13	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13252WAA026	09/09/2013 15:30	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132546256001	09/11/2013 05:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132501848011	09/10/2013 19:40	John P Hook	1
07046	Barium	SW-846 6010B	1	132501848011	09/10/2013 19:40	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132501848011	09/10/2013 19:40	John P Hook	1
01750	Calcium	SW-846 6010B	1	132501848011	09/10/2013 19:40	John P Hook	1
07051	Chromium	SW-846 6010B	1	132501848011	09/10/2013 19:40	John P Hook	1
07055	Lead	SW-846 6010B	1	132501848011	09/10/2013 19:40	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132501848011	09/10/2013 19:40	John P Hook	1
07061	Nickel	SW-846 6010B	1	132501848011	09/10/2013 19:40	John P Hook	1
07036	Selenium	SW-846 6010B	1	132501848011	09/10/2013 19:40	John P Hook	1
07066	Silver	SW-846 6010B	1	132501848011	09/10/2013 19:40	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132501848011	09/10/2013 19:40	John P Hook	1
00259	Mercury	SW-846 7470A	1	132505713009	09/11/2013 07:28	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132501848011	09/10/2013 09:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132505713009	09/10/2013 16:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13255807902A	09/12/2013 10:44	Yolunder Y Bunch	1

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

Sample Description: WS-007(0.5-1.0)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189261
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 13:10 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-0705 SDG#: PEL30-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
		purge				
02898	Acetone	67-64-1	5.6	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)090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189261**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 13:10 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-0705 SDG#: PEL30-14

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	19.3	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	0.0208	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-007(0.5-1.0)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189261
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 13:10 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-0705 SDG#: PEL30-14

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	
01750	Calcium	7440-70-2	4.67	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	1.85	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	3.1 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132522AA	09/10/2013 02:36	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132522AA	09/10/2013 02:36	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13252WAA026	09/10/2013 22:42	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13252WAA026	09/09/2013 15:30	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132546256001	09/11/2013 05:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132501848011	09/10/2013 19:51	John P Hook	1
07046	Barium	SW-846 6010B	1	132501848011	09/10/2013 19:51	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132501848011	09/10/2013 19:51	John P Hook	1
01750	Calcium	SW-846 6010B	1	132501848011	09/10/2013 19:51	John P Hook	1
07051	Chromium	SW-846 6010B	1	132501848011	09/10/2013 19:51	John P Hook	1
07055	Lead	SW-846 6010B	1	132501848011	09/10/2013 19:51	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132501848011	09/10/2013 19:51	John P Hook	1
07061	Nickel	SW-846 6010B	1	132501848011	09/10/2013 19:51	John P Hook	1
07036	Selenium	SW-846 6010B	1	132501848011	09/10/2013 19:51	John P Hook	1
07066	Silver	SW-846 6010B	1	132501848011	09/10/2013 19:51	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132501848011	09/10/2013 19:51	John P Hook	1
00259	Mercury	SW-846 7470A	1	132505713009	09/11/2013 07:30	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132501848011	09/10/2013 09:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132505713009	09/10/2013 16:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13255807902A	09/12/2013 10:44	Yolunder Y Bunch	1

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

Sample Description: WS-001(0.5-1.0)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189262
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 13:20 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-0105 SDG#: PEL30-15

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

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

Sample Description: **WS-001(0.5-1.0)090613 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189262**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 13:20 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-0105 SDG#: PEL30-15

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	28.6	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0453	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)090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189262
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 13:20 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-0105 SDG#: PEL30-15

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	6.60	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	2.95	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132522AA	09/10/2013 02:58	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132522AA	09/10/2013 02:58	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13252WAA026	09/10/2013 23:12	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13252WAA026	09/09/2013 15:30	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132546256001	09/11/2013 05:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132501848011	09/10/2013 19:55	John P Hook	1
07046	Barium	SW-846 6010B	1	132501848011	09/10/2013 19:55	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132501848011	09/10/2013 19:55	John P Hook	1
01750	Calcium	SW-846 6010B	1	132501848011	09/10/2013 19:55	John P Hook	1
07051	Chromium	SW-846 6010B	1	132501848011	09/10/2013 19:55	John P Hook	1
07055	Lead	SW-846 6010B	1	132501848011	09/10/2013 19:55	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132501848011	09/10/2013 19:55	John P Hook	1
07061	Nickel	SW-846 6010B	1	132501848011	09/10/2013 19:55	John P Hook	1
07036	Selenium	SW-846 6010B	1	132501848011	09/10/2013 19:55	John P Hook	1
07066	Silver	SW-846 6010B	1	132501848011	09/10/2013 19:55	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132501848011	09/10/2013 19:55	John P Hook	1
00259	Mercury	SW-846 7470A	1	132505713009	09/11/2013 07:32	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132501848011	09/10/2013 09:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132505713009	09/10/2013 16:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13255807902A	09/12/2013 10:44	Yolunder Y Bunch	1

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

Sample Description: **WS-EB-53-090613 Grab Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189263**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 14:00 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-EB53 SDG#: PEL30-16EB

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

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

Sample Description: **WS-EB-53-090613 Grab Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189263**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 14:00 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-EB53 SDG#: PEL30-16EB

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	0.23	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	N.D.	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1

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

Sample Description: **WS-EB-53-090613 Grab Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189263**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 14:00 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-EB53 SDG#: PEL30-16EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		mg/l	mg/l	mg/l	
01750	Calcium	7440-70-2	0.0933 J	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	N.D.	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132522AA	09/09/2013 23:16	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132522AA	09/09/2013 23:16	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13252WAA026	09/10/2013 23:42	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13252WAA026	09/09/2013 15:30	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132546256001	09/11/2013 05:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132501848011	09/10/2013 19:58	John P Hook	1
07046	Barium	SW-846 6010B	1	132501848011	09/10/2013 19:58	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132501848011	09/10/2013 19:58	John P Hook	1
01750	Calcium	SW-846 6010B	1	132501848011	09/10/2013 19:58	John P Hook	1
07051	Chromium	SW-846 6010B	1	132501848011	09/10/2013 19:58	John P Hook	1
07055	Lead	SW-846 6010B	1	132501848011	09/10/2013 19:58	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132501848011	09/10/2013 19:58	John P Hook	1
07061	Nickel	SW-846 6010B	1	132501848011	09/10/2013 19:58	John P Hook	1
07036	Selenium	SW-846 6010B	1	132501848011	09/10/2013 19:58	John P Hook	1
07066	Silver	SW-846 6010B	1	132501848011	09/10/2013 19:58	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132501848011	09/10/2013 19:58	John P Hook	1
00259	Mercury	SW-846 7470A	1	132505713009	09/11/2013 07:34	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132501848011	09/10/2013 09:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132505713009	09/10/2013 16:50	Nelli S Markaryan	1

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

Sample Description: **WS-TB-142-090613 Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7189264**
 LL Group # **1417160**
 Account # **14739**

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

Collected: 09/06/2013 14:10

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

TB142 SDG#: PEL30-17TB

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

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

Sample Description: WS-TB-142-090613 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189264
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 14:10

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

TB142 SDG#: PEL30-17TB

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

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	C132522AA	09/09/2013 23:38	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132522AA	09/09/2013 23:38	Brett W Kenyon	1

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

Sample Description: DUP-WS-083-090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189265
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-FD83 SDG#: PEL30-18FD*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
		purge				
02898	Acetone	67-64-1	3.8 J	3.0	5.0	1
02898	Allyl Chloride	107-05-1	N.D.	0.1	0.5	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	N.D.	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	N.D.	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethyl ether	60-29-7	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1

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

Sample Description: DUP-WS-083-090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189265
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-FD83 SDG#: PEL30-18FD*

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	29.7	0.033	0.20	1

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

Sample Description: DUP-WS-083-090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189265
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-FD83 SDG#: PEL30-18FD*

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	0.0678	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.86	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.05	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C132522AA	09/10/2013 03:20	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C132522AA	09/10/2013 03:20	Brett W Kenyon	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13252WAA026	09/11/2013 00:11	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13252WAA026	09/09/2013 15:30	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132546256001	09/11/2013 05:16	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132501848011	09/10/2013 20:02	John P Hook	1
07046	Barium	SW-846 6010B	1	132501848011	09/10/2013 20:02	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132501848011	09/10/2013 20:02	John P Hook	1
01750	Calcium	SW-846 6010B	1	132501848011	09/10/2013 20:02	John P Hook	1
07051	Chromium	SW-846 6010B	1	132501848011	09/10/2013 20:02	John P Hook	1
07055	Lead	SW-846 6010B	1	132501848011	09/10/2013 20:02	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132501848011	09/10/2013 20:02	John P Hook	1
07061	Nickel	SW-846 6010B	1	132501848011	09/10/2013 20:02	John P Hook	1
07036	Selenium	SW-846 6010B	1	132501848011	09/10/2013 20:02	John P Hook	1
07066	Silver	SW-846 6010B	1	132501848011	09/10/2013 20:02	John P Hook	1
07071	Vanadium	SW-846 6010B	1	132501848011	09/10/2013 20:02	John P Hook	1
00259	Mercury	SW-846 7470A	1	132505713009	09/11/2013 07:40	Damary Valentin	1

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

Sample Description: DUP-WS-083-090613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7189265
LL Group # 1417160
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/06/2013 by DD

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

Submitted: 09/07/2013 08:45

Reported: 09/16/2013 11:20

-FD83 SDG#: PEL30-18FD*

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	132501848011	09/10/2013 09:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132505713009	09/10/2013 16:50	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13255807902A	09/12/2013 10:44	Yolunder Y Bunch	1

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/16/13 at 11:20 AM

Group Number: 1417160

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: C132521AA	Sample number(s): 7189248-7189255								
Acetone	N.D.	3.0	5.0	ug/l	113		60-139		
Allyl Chloride	N.D.	0.1	0.5	ug/l	78		61-130		
Benzene	N.D.	0.1	0.5	ug/l	101		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	101		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	113		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	106		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	120		73-128		
Bromomethane	N.D.	0.1	0.5	ug/l	85		62-126		
2-Butanone	N.D.	1.0	5.0	ug/l	109		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	96		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	95		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	115		80-129		
Chlorobenzene	N.D.	0.1	0.5	ug/l	107		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	81		68-120		
Chloroform	N.D.	0.1	0.5	ug/l	108		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	63		55-120		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	98		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	100		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	108		64-141		
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	103		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	102		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	103		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	55		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	111		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	106		80-123		
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	103		80-120		
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	109		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	95		75-145		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	101		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	95		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	97		80-123		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	97		80-120		
Ethyl ether	N.D.	0.1	0.5	ug/l	92		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	101		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	109		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	95		73-120		

*- Outside of specification

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/16/13 at 11:20 AM

Group Number: 1417160

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCS %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Isopropylbenzene	N.D.	0.1	0.5	ug/l	100		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	95		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	89		80-120		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	85		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	106		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	97		80-120		
Styrene	N.D.	0.1	0.5	ug/l	105		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	108		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	95		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	108		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	119		65-131		
Toluene	N.D.	0.1	0.5	ug/l	103		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	78		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	82		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	107		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	107		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	109		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	97		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	106		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	99		80-120		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	97		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	73		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	103		80-120		

Batch number: C132522AA

Sample number(s): 7189256-7189265

Acetone	N.D.	3.0	5.0	ug/l	118		60-139		
Allyl Chloride	N.D.	0.1	0.5	ug/l	75		61-130		
Benzene	N.D.	0.1	0.5	ug/l	101		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	104		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	112		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	106		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	121		73-128		
Bromomethane	N.D.	0.1	0.5	ug/l	76		62-126		
2-Butanone	N.D.	1.0	5.0	ug/l	118		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	97		80-120		
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	97		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	96		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	113		80-129		
Chlorobenzene	N.D.	0.1	0.5	ug/l	109		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	73		68-120		
Chloroform	N.D.	0.1	0.5	ug/l	108		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	56		55-120		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	100		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	102		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	123		64-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	113		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	107		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	111		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	107		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	107		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	45		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	96		80-120		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	111		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	102		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 Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/16/13 at 11:20 AM

Group Number: 1417160

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCS %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	107		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	86		75-145		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	101		80-120		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	101		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	94		75-122		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	101		80-121		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	92		80-123		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	95		80-120		
Ethyl ether	N.D.	0.1	0.5	ug/l	84		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	102		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	106		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	94		73-120		
Isopropylbenzene	N.D.	0.1	0.5	ug/l	100		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	97		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	88		80-120		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	84		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	105		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	97		80-120		
Styrene	N.D.	0.1	0.5	ug/l	106		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	111		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	98		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	107		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	130		65-131		
Toluene	N.D.	0.1	0.5	ug/l	102		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	80		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	82		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	105		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	109		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	107		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	86		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	110		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	99		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	65		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	104		80-120		

Batch number: 13252WAA026

Sample number(s): 7189248-7189263, 7189265

Acenaphthene	N.D.	0.010	0.050	ug/l	102	106	77-118	4	30
Acenaphthylene	N.D.	0.010	0.050	ug/l	114	117	80-123	3	30
Anthracene	N.D.	0.010	0.050	ug/l	108	114	78-123	5	30
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	90	91	73-127	1	30
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	96	102	72-120	6	30
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	106	111	79-136	5	30
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	104	108	64-130	4	30
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	115	121	73-131	5	30
Chrysene	N.D.	0.010	0.050	ug/l	108	110	76-125	2	30
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	100	101	58-131	1	30
Fluoranthene	N.D.	0.010	0.050	ug/l	111	116	79-124	5	30
Fluorene	N.D.	0.010	0.050	ug/l	106	109	74-115	3	30
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	106	109	62-130	3	30
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	116	119	80-126	3	30
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	118	120	81-124	2	30
Naphthalene	N.D.	0.030	0.050	ug/l	106	110	75-120	3	30
Phenanthrene	N.D.	0.030	0.050	ug/l	108	113	75-120	5	30
Pyrene	N.D.	0.010	0.050	ug/l	101	104	71-130	3	30

*- Outside of specification

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/16/13 at 11:20 AM

Group Number: 1417160

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 132501848011	Sample number(s): 7189248-7189263,7189265								
Arsenic	N.D.	0.0068	0.0200	mg/l	100		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	101		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	101		90-112		
Calcium	N.D.	0.0334	0.200	mg/l	102		90-110		
Chromium	N.D.	0.0016	0.0150	mg/l	101		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	98		88-110		
Magnesium	N.D.	0.0167	0.100	mg/l	100		90-110		
Nickel	N.D.	0.0015	0.0100	mg/l	103		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	96		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	113		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	102		90-110		
Batch number: 132505713009	Sample number(s): 7189248-7189263,7189265								
Mercury	N.D.	0.00006	0.00020	mg/l	100		80-120		
		0							
Batch number: 13255807902A	Sample number(s): 7189248-7189262,7189265								
HEM (oil & grease)	N.D.	1.4	5.0	mg/l	87	91	78-114	4	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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: C132521AA	Sample number(s): 7189248-7189255 UNSPK: 7189249								
Acetone	126	124	57-163	1	30				
Allyl Chloride	75	82	56-160	8	30				
Benzene	98	107	87-126	9	30				
Bromobenzene	96	108	80-123	12	30				
Bromochloromethane	109	115	82-125	5	30				
Bromodichloromethane	99	110	82-133	10	30				
Bromoform	110	125	60-138	13	30				
Bromomethane	87	90	66-130	4	30				
2-Butanone	108	111	56-160	2	30				
n-Butylbenzene	95	105	83-131	10	30				
sec-Butylbenzene	94	105	84-128	11	30				
tert-Butylbenzene	91	104	84-135	13	30				
Carbon Tetrachloride	115	122	81-148	6	30				
Chlorobenzene	103	114	78-133	10	30				
Chloroethane	84	86	70-139	3	30				
Chloroform	107	113	86-136	6	30				
Chloromethane	66	69	49-135	5	30				
2-Chlorotoluene	94	106	75-134	12	30				
4-Chlorotoluene	97	109	76-134	11	30				
1,2-Dibromo-3-chloropropane	110	115	43-143	4	30				
Dibromochloromethane	104	117	79-125	12	30				
1,2-Dibromoethane	97	109	84-127	11	30				
Dibromomethane	102	111	83-126	8	30				
1,2-Dichlorobenzene	98	111	83-117	12	30				
1,3-Dichlorobenzene	98	109	79-132	11	30				

*- Outside of specification

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/16/13 at 11:20 AM

Group Number: 1417160

Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
1,4-Dichlorobenzene	99	110	79-120	11	30				
Dichlorodifluoromethane	57	56	28-136	1	30				
1,1-Dichloroethane	93	101	88-136	9	30				
1,2-Dichloroethane	103	112	82-135	8	30				
1,1-Dichloroethene	102	113	83-150	9	30				
cis-1,2-Dichloroethene	97	107	82-129	9	30				
trans-1,2-Dichloroethene	106	113	88-127	7	30				
Dichlorofluoromethane	98	102	81-161	4	30				
1,2-Dichloropropane	96	106	91-126	10	30				
1,3-Dichloropropane	92	104	80-127	12	30				
2,2-Dichloropropane	93	103	80-134	10	30				
1,1-Dichloropropene	101	112	86-139	10	30				
cis-1,3-Dichloropropene	84	97	74-132	15	30				
trans-1,3-Dichloropropene	86	99	71-128	14	30				
Ethyl ether	86	94	57-139	9	30				
Ethylbenzene	97	108	80-140	11	30				
Freon 113	112	116	77-147	3	30				
Hexachlorobutadiene	91	103	65-128	12	30				
Isopropylbenzene	97	109	81-133	12	30				
p-Isopropyltoluene	92	103	84-124	11	30				
Methyl Tertiary Butyl Ether	79*	90	82-132	13	30				
4-Methyl-2-Pentanone	77	91	69-149	17	30				
Methylene Chloride	101	109	77-135	8	30				
n-Propylbenzene	93	104	79-131	11	30				
Styrene	99	111	63-151	11	30				
1,1,1,2-Tetrachloroethane	103	114	87-126	11	30				
1,1,2,2-Tetrachloroethane	90	104	75-131	14	30				
Tetrachloroethene	106	114	75-129	8	30				
Tetrahydrofuran	119	119	56-154	1	30				
Toluene	100	110	83-127	9	30				
1,2,3-Trichlorobenzene	72*	86	73-125	17	30				
1,2,4-Trichlorobenzene	76*	89	77-120	16	30				
1,1,1-Trichloroethane	104	113	85-140	8	30				
1,1,2-Trichloroethane	100	112	85-129	11	30				
Trichloroethene	105	115	85-131	9	30				
Trichlorofluoromethane	105	104	73-139	1	30				
1,2,3-Trichloropropane	101	110	76-120	9	30				
1,2,4-Trimethylbenzene	95	106	87-126	12	30				
1,3,5-Trimethylbenzene	94	106	89-129	12	30				
Vinyl Chloride	77	81	62-135	5	30				
Xylene (Total)	98	109	81-137	11	30				
Batch number: C132522AA	Sample number(s): 7189256-7189265 UNSPK: 7189256								
Acetone	125	128	57-163	3	30				
Allyl Chloride	81	86	56-160	6	30				
Benzene	112	112	87-126	0	30				
Bromobenzene	112	111	80-123	0	30				
Bromochloromethane	118	118	82-125	0	30				
Bromodichloromethane	113	112	82-133	1	30				
Bromoform	126	124	60-138	1	30				
Bromomethane	94	77	66-130	19	30				
2-Butanone	115	109	56-160	5	30				

*- Outside of specification

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/16/13 at 11:20 AM

Group Number: 1417160

Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup</u> <u>RPD</u> <u>Max</u>
n-Butylbenzene	110	108	83-131	2	30				
sec-Butylbenzene	109	109	84-128	1	30				
tert-Butylbenzene	108	107	84-135	1	30				
Carbon Tetrachloride	132	127	81-148	3	30				
Chlorobenzene	118	118	78-133	0	30				
Chloroethane	91	74	70-139	20	30				
Chloroform	118	117	86-136	2	30				
Chloromethane	68	57	49-135	16	30				
2-Chlorotoluene	110	109	75-134	1	30				
4-Chlorotoluene	111	111	76-134	0	30				
1,2-Dibromo-3-chloropropane	120	112	43-143	7	30				
Dibromochloromethane	119	119	79-125	0	30				
1,2-Dibromoethane	112	112	84-127	0	30				
Dibromomethane	117	116	83-126	1	30				
1,2-Dichlorobenzene	113	112	83-117	1	30				
1,3-Dichlorobenzene	113	112	79-132	1	30				
1,4-Dichlorobenzene	114	113	79-120	1	30				
Dichlorodifluoromethane	55	41	28-136	30	30				
1,1-Dichloroethane	106	107	88-136	1	30				
1,2-Dichloroethane	118	117	82-135	2	30				
1,1-Dichloroethene	118	118	83-150	0	30				
cis-1,2-Dichloroethene	113	112	82-129	1	30				
trans-1,2-Dichloroethene	120	119	88-127	0	30				
Dichlorofluoromethane	110	90	81-161	20	30				
1,2-Dichloropropane	110	109	91-126	1	30				
1,3-Dichloropropane	107	106	80-127	1	30				
2,2-Dichloropropane	109	106	80-134	2	30				
1,1-Dichloropropene	119	117	86-139	2	30				
cis-1,3-Dichloropropene	100	101	74-132	1	30				
trans-1,3-Dichloropropene	101	103	71-128	1	30				
Ethyl ether	96	95	57-139	1	30				
Ethylbenzene	112	111	80-140	1	30				
Freon 113	126	115	77-147	9	30				
Hexachlorobutadiene	109	107	65-128	2	30				
Isopropylbenzene	113	112	81-133	1	30				
p-Isopropyltoluene	108	107	84-124	1	30				
Methyl Tertiary Butyl Ether	91	95	82-132	4	30				
4-Methyl-2-Pentanone	87	90	69-149	3	30				
Methylene Chloride	114	114	77-135	0	30				
n-Propylbenzene	109	108	79-131	0	30				
Styrene	116	114	63-151	2	30				
1,1,1,2-Tetrachloroethane	118	117	87-126	1	30				
1,1,2,2-Tetrachloroethane	101	102	75-131	1	30				
Tetrachloroethene	122	119	75-129	3	30				
Tetrahydrofuran	123	122	56-154	1	30				
Toluene	115	114	83-127	1	30				
1,2,3-Trichlorobenzene	84	89	73-125	6	30				
1,2,4-Trichlorobenzene	89	92	77-120	3	30				
1,1,1-Trichloroethane	120	117	85-140	2	30				
1,1,2-Trichloroethane	115	113	85-129	1	30				
Trichloroethene	120	119	85-131	1	30				
Trichlorofluoromethane	115	88	73-139	27	30				

*- Outside of specification

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/16/13 at 11:20 AM

Group Number: 1417160

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
1,2,3-Trichloropropane	113	111	76-120	2	30				
1,2,4-Trimethylbenzene	110	109	87-126	1	30				
1,3,5-Trimethylbenzene	109	109	89-129	0	30				
Vinyl Chloride	83	68	62-135	20	30				
Xylene (Total)	115	113	81-137	1	30				

Batch number:	Sample number(s):	UNSPK:	BKG:						
132501848011	7189248-7189263,7189265	7189258	7189258						
Arsenic	104	104	81-123	0	20	N.D.	N.D.	0 (1)	20
Barium	102	100	78-118	1	20	0.0712	0.0702	1	20
Cadmium	101	101	83-116	0	20	N.D.	N.D.	0 (1)	20
Calcium	97	95	81-118	1	20	7.06	7.02	0	20
Chromium	102	100	81-120	2	20	N.D.	N.D.	0 (1)	20
Lead	101	99	75-125	1	20	N.D.	N.D.	0 (1)	20
Magnesium	96	94	75-125	1	20	3.26	3.25	0	20
Nickel	104	103	86-115	1	20	N.D.	N.D.	0 (1)	20
Selenium	97	97	75-125	1	20	N.D.	N.D.	0 (1)	20
Silver	114	114	75-125	0	20	N.D.	N.D.	0 (1)	20
Vanadium	104	102	90-111	2	20	N.D.	N.D.	0 (1)	20
Batch number:	132505713009	Sample number(s):	7189248-7189263,7189265	UNSPK:	7189250	BKG:	7189250		
Mercury	105	98	80-120	6	20	N.D.	N.D.	0 (1)	20
Batch number:	13255807902A	Sample number(s):	7189248-7189262,7189265	UNSPK:	7189248				
HEM (oil & grease)	85		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: C132521AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7189248	108	105	97	95
7189249	106	103	96	94
7189250	107	103	97	95
7189251	106	105	97	94
7189252	109	106	96	94
7189253	108	105	97	94
7189254	108	107	97	93
7189255	108	103	97	95
Blank	106	106	98	96
LCS	103	103	98	99
MS	104	104	100	102
MSD	104	103	99	101
Limits:	77-114	74-113	77-110	78-110

*- Outside of specification

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

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 09/16/13 at 11:20 AM

Group Number: 1417160

Surrogate Quality Control

Analysis Name: BTEX 25-ml purge
Batch number: C132522AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7189256	107	103	97	94
7189257	106	104	97	94
7189258	107	105	97	94
7189259	107	104	96	94
7189260	107	106	96	94
7189261	108	105	97	95
7189262	108	103	97	94
7189263	107	106	97	94
7189264	108	106	96	94
7189265	107	104	97	94
Blank	107	105	98	94
LCS	104	104	100	102
MS	104	102	99	101
MSD	103	101	100	100
<hr/>				
Limits:	77-114	74-113	77-110	78-110

Analysis Name: PAHs in waters by SIM
Batch number: 13252WAA026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7189248	90	67	104
7189249	87	59*	96
7189250	90	67	104
7189251	88	62	97
7189252	92	55*	107
7189253	93	64	107
7189254	91	65	105
7189255	91	70	106
7189256	91	65	103
7189257	90	61*	104
7189258	92	58*	106
7189259	90	61*	102
7189260	92	67	106
7189261	84	70	104
7189262	91	63	103
7189263	90	88	108
7189265	93	58*	105
Blank	90	91	103
LCS	93	92	110
LCSD	95	96	111
<hr/>			
Limits:	44-137	62-141	51-136

*- Outside of specification

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

ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

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Acct. # 14739

Group # 1417160

Sample # 7189248-265

Instructions on reverse side correspond with circled numbers.

1 of 2

1 Client Information				4 Matrix				5 Analyses Requested								6		
Facility #/SID <u>Mayflower Pipeline Incident</u>				Sediment <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Oil <input type="checkbox"/>	Ground <input type="checkbox"/> Surface <input checked="" type="checkbox"/>	Air <input type="checkbox"/>	Preservation Code								SCR#			
Site Address <u>Mayflower AR</u>							Total # of Containers	H H H H H H H H H H H H H H								Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other		
ExxonMobil PM <u>Scott Bushroe</u>		Cost Center/AFE						<u>VOCs 8260B</u>	<u>PAH 8270 SIM</u>	<u>RCRA Metals + U/V/Co/As</u>	<u>Diss. Metals</u>	<u>HEM Oil & Grease</u>					Remarks <u>Lab to filter and pressure diss. metals upon receipt</u>	
Consultant/Office <u>ARCADIS</u>																		
Consultant PM <u>Steve Barrick</u>		Consultant Phone # <u>919-302-6799</u>																
Sampler <u>Dave Frost Ryan Lewis</u>				Soil <input type="checkbox"/>	Water <input type="checkbox"/>													
2 Sample Identification		3 Collected		Grab		Composite												
		Date	Time															
<u>WS-014 (1.5-2.0) 090613</u>		<u>9-6-2013</u>	<u>935</u>	<u>X</u>				<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>					
<u>WS-014 (5.5-6.0) 090613</u>		<u>9-6-2013</u>	<u>945</u>	<u>X</u>				<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>					
<u>WS-012 (1.5-2.0) 090613</u>		<u>9-6-2013</u>	<u>1005</u>	<u>X</u>				<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>					
<u>WS-012 (5.0-5.5) 090613</u>		<u>9-6-2013</u>	<u>1015</u>	<u>X</u>				<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>					
<u>WS-010 (1.5-2.0) 090613</u>		<u>9-6-2013</u>	<u>1030</u>	<u>X</u>				<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>					
<u>WS-010 (3.5-4.0) 090613</u>		<u>9-6-2013</u>	<u>1040</u>	<u>X</u>				<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>					
<u>WS-006 (0.5-1.0) 090613</u>		<u>9-6-2013</u>	<u>1100</u>	<u>X</u>				<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>					
<u>WS-005 (surface) 090613</u>		<u>9-6-2013</u>	<u>1130</u>	<u>X</u>				<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>					
<u>WS-002 (surface) 090613</u>		<u>9-6-2013</u>	<u>1150</u>	<u>X</u>				<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>					
<u>WS-011 (1.5-2.0) 090613</u>		<u>9-6-2013</u>	<u>1200</u>	<u>X</u>				<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>					
<u>WS-011 (5.0-5.5) 090613</u>		<u>9-6-2013</u>	<u>1210</u>	<u>X</u>				<u>9</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>					
<u>WS-018 (surface) 090613</u>		<u>9-6-2013</u>	<u>1236</u>	<u>X</u>				<u>9</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 <u>Ryan Lewis</u>		Date	Time	Received by		Date	Time	9						
Standard <u>5 day</u> 4 day						<u>9.6.2013</u>	<u>1530</u>											
72 hour 48 hour 24 hour				Relinquished by		Date	Time	Received by		Date	Time							
				Relinquished by		Date	Time	Received by		Date	Time							
8 Data Package (circle if required)				Relinquished by Commercial Carrier		Received by		Date		Time								
Type I - Full				UPS <u>X</u> FedEx Other		<u>[Signature]</u>		<u>9/7/13</u>		<u>845</u>								
Type VI (Raw Data)				Temperature Upon Receipt <u>0.7-4.6 °C</u>		Custody Seals Intact?		<u>Yes</u>		No								
NJ Reduced																		
Other																		

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

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

ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

Acct. # 14739 For Eurofins Lancaster Laboratories Environmental use only
 Group # 1417160 Sample # 7189248-65
Instructions on reverse side correspond with circled numbers.

2 of 2

1 Client Information			4 Matrix				5 Analyses Requested						SCR#: _____																						
Facility #/SID <u>Mayflower Pipeline Incident</u>			Sediment <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input checked="" type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Oil <input type="checkbox"/> Total # of Containers	Preservation Code						Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other																									
Site Address <u>Mayflower, AR</u>				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">H</td><td style="width: 20%;">N</td><td style="width: 20%;">H</td><td style="width: 20%;"></td><td style="width: 20%;"></td><td style="width: 20%;"></td><td style="width: 20%;"></td><td style="width: 20%;"></td><td style="width: 20%;"></td><td style="width: 20%;"></td> </tr> <tr> <td style="text-align: center;">VOCs 8260B</td><td style="text-align: center;">PAH 8270 SIM</td><td style="text-align: center;">RCRA Metals + Ar, V, Cr, Hg <small>Pyrolysis</small></td><td style="text-align: center;">Diss. Metals</td><td style="text-align: center;">HEM Oil & Grease</td><td></td><td></td><td></td><td></td><td></td> </tr> </table>						H	N	H								VOCs 8260B	PAH 8270 SIM	RCRA Metals + Ar, V, Cr, Hg <small>Pyrolysis</small>	Diss. Metals	HEM Oil & Grease						6 Remarks					
H	N	H																																	
VOCs 8260B	PAH 8270 SIM	RCRA Metals + Ar, V, Cr, Hg <small>Pyrolysis</small>								Diss. Metals	HEM Oil & Grease																								
ExxonMobil PM <u>Scott Bushroe</u>		Cost Center/AFE																																	
Consultant/Office <u>ARCADIS</u>																																			
Consultant PM <u>Steve Barrick</u>		Consultant Phone # <u>919-302-6799</u>																																	
Sampler <u>Dave Frost / Ryan Lewis</u>																																			
2 Sample Identification			3 Collected		Grab		Composite																												
		Date	Time	Soil	Water	Oil	Total # of Containers																												
<u>WS-003 (surface) 090613</u>		<u>9-6-2013</u>	<u>1240</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>9</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																							
<u>WS-007 (0.5-1.0) 090613</u>		<u>9-6-2013</u>	<u>1310</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>9</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																							
<u>WS-001 (0.5-1.0) 090613</u>		<u>9-6-2013</u>	<u>1320</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>9</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																							
<u>WS-EB-53-090613</u>		<u>9-6-2013</u>	<u>1400</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>7</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																							
<u>WS-TB-142-090613</u>		<u>9-6-2013</u>	<u>1410</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>2</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																							
<u>DUP-WS-83-090613</u>		<u>9-6-2013</u>	<u>—</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>9</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																							
7 Turnaround Time Requested (TAT) (please circle)			Relinquished by <u>Ryan Lewis</u>			Date <u>9-6-2013</u>		Time <u>1530</u>		Received by			Date		Time																				
Standard <u>5 day</u> 4 day			<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>																									
72 hour 48 hour 24 hour										<input type="checkbox"/>																									
8 Data Package (circle if required)			Relinquished by Commercial Carrier			Received by			Date		Time																								
Type I - Full			Locus EIM (default)			<u>UPS</u> <input checked="" type="checkbox"/> FedEx _____ Other _____			<u>[Signature]</u>			<u>9/7/13</u>		<u>845</u>																					
Type VI (Raw Data)			Other _____			Temperature Upon Receipt <u>0.7-4.0</u> °C			Custody Seals Intact?			<u>Yes</u> No																							
NJ Reduced																																			
Other _____																																			

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

Environmental Sample Administration
Receipt Documentation Log

Client/Project: ExxonMobil

Shipping Container Sealed: YES NO

Date of Receipt: 9/7/13

Custody Seal Present * : YES NO

Time of Receipt: 845

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

Source Code: 60-1

Package: Chilled Not Chilled

Temperature of Shipping Containers

Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT121	1.0	TB	WI	Y	B	
2	↓	2.3	↓	↓	↓	↓	
3	↓	2.2	↓	↓	↓	↓	
4	↓	0.7	↓	↓	↓	↓	
5	↓	0.8	↓	↓	↓	↓	
6	↓	4.6	↓	↓	↓	↓	

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#:

[Signature] 2308

Date/Time:

9/7/13 1010

Explanation of Symbols and Abbreviations

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

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m³	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

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

ppb parts per billion

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

Data Qualifiers:

C – result confirmed by reanalysis.

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

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

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

Inorganic Qualifiers

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

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

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

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

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

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