

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

October 09, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 10/01/2013

Group Number: 1422681

SDG: PEL84

PO Number: B0086003.1301

State of Sample Origin: AR

Client Sample DescriptionLancaster Labs (LL) #

WS-014(1.5-2.0)093013 Grab Surface Water	7218960
WS-014(5.5-6.0)093013 Grab Surface Water	7218961
WS-012(1.5-2.0)093013 Grab Surface Water	7218962
WS-012(5.0-5.5)093013 Grab Surface Water	7218963
WS-010(1.5-2.0)0993013 Grab Surface Water	7218964
WS-010(3.5-4.0)0993013 Grab Surface Water	7218965
WS-006(0.5-1.0)093013 Grab Surface Water	7218966
WS-005(Surface)093013 Grab Surface Water	7218967
WS-002(Surface)093013 Grab Surface Water	7218968
WS-011(1.5-2.0)093013 Grab Surface Water	7218969
WS-011(5.0-5.5)093013 Grab Surface Water	7218970
WS-018(Surface)093013 Grab Surface Water	7218971
WS-003(Surface)093013 Grab Surface Water	7218972
WS-007(0.5-1.0)093013 Grab Surface Water	7218973
WS-001(0.5-1.0)093013 Grab Surface Water	7218974
WS-EB-77-093013 Grab Water	7218975
DUP-WS-95-093013 Grab Surface Water	7218976
WS-TB-164-093013 Water	7218977

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

ELECTRONIC ARCADIS

Attn: Stephen Barrick

COPY TO

ELECTRONIC ARCADIS

Attn: Lyndi Mott

COPY TO

ELECTRONIC ExxonMobil

Attn: Michael J. Firth

COPY TO

ELECTRONIC COPY TO
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ELECTRONIC COPY TO

ARCADIS

ARCADIS

ARCADIS

ExxonMobil

ExxonMobil

Attn: Emily Leamer

Attn: Rhiannon Parmalee

Attn: Jamie Pritchard

Attn: Michael L Sixsmith

Attn: Julie Foster

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1422681

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 8270C SIM, GC/MS Semivolatiles**

Batch #: 13275WAF026 (Sample number(s): 7218960-7218976)

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7218965, 7218968, 7218971

Sample #s: 7218972

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials with the exception of:
Benzo(b)fluoranthene .02 ug/l
was the only compound detected in the re-extraction.

Sample #s: 7218974

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials with the exception of:
pyrene was not detected in the re-extraction.

Sample #s: 7218960, 7218961, 7218962, 7218963, 7218964, 7218966, 7218967, 7218969, 7218970, 7218973, 7218975, 7218976

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

Sample #s: 7218965, 7218968, 7218971

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

Sample Description: WS-014(1.5-2.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218960
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 08:35 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30141 SDG#: PEL84-01

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)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218960
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 08:35 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30141 SDG#: PEL84-01

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	0.053	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	0.043 J	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	29.7	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	0.0453	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-014(1.5-2.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218960
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 08:35 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30141 SDG#: PEL84-01

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	6.80	0.0334	0.200	1
07051	Chromium	7440-47-3	0.0022 J	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	3.09	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0017 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
	EPA 1664A		mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132751AA	10/02/2013 15:35	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 15:35	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13275WAF026	10/05/2013 04:51	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13275WAF026	10/03/2013 09:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132796256001	10/06/2013 06:12	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132741848005	10/04/2013 19:29	John P Hook	1
07046	Barium	SW-846 6010B	1	132741848005	10/04/2013 19:29	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132741848005	10/04/2013 19:29	John P Hook	1
01750	Calcium	SW-846 6010B	1	132741848005	10/04/2013 19:29	John P Hook	1
07051	Chromium	SW-846 6010B	1	132741848005	10/04/2013 19:29	John P Hook	1
07055	Lead	SW-846 6010B	1	132741848005	10/04/2013 19:29	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132741848005	10/04/2013 19:29	John P Hook	1
07061	Nickel	SW-846 6010B	1	132741848005	10/04/2013 19:29	John P Hook	1
07036	Selenium	SW-846 6010B	1	132741848005	10/04/2013 19:29	John P Hook	1
07066	Silver	SW-846 6010B	1	132741848005	10/06/2013 22:09	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132741848005	10/04/2013 19:29	John P Hook	1
00259	Mercury	SW-846 7470A	1	132745713006	10/03/2013 05:39	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132741848005	10/02/2013 08:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132745713006	10/02/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-014(1.5-2.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218960
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 08:35 by DD

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 10/01/2013 10:00

Highlands Ranch CO 80129

Reported: 10/09/2013 09:01

30141 SDG#: PEL84-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13280807903A	10/07/2013 17:33	Michelle L Lalli	1

Sample Description: WS-014(5.5-6.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218961
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30142 SDG#: PEL84-02

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)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218961
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30142 SDG#: PEL84-02

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.						
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	0.0462	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(5.5-6.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218961
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30142 SDG#: PEL84-02

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	
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	3.11	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.	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	I132751AA	10/02/2013 15:56	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 15:56	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13275WAF026	10/05/2013 05:21	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13275WAF026	10/03/2013 09:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132796256001	10/06/2013 06:12	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132741848005	10/04/2013 19:33	John P Hook	1
07046	Barium	SW-846 6010B	1	132741848005	10/04/2013 19:33	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132741848005	10/04/2013 19:33	John P Hook	1
01750	Calcium	SW-846 6010B	1	132741848005	10/04/2013 19:33	John P Hook	1
07051	Chromium	SW-846 6010B	1	132741848005	10/04/2013 19:33	John P Hook	1
07055	Lead	SW-846 6010B	1	132741848005	10/04/2013 19:33	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132741848005	10/04/2013 19:33	John P Hook	1
07061	Nickel	SW-846 6010B	1	132741848005	10/04/2013 19:33	John P Hook	1
07036	Selenium	SW-846 6010B	1	132741848005	10/04/2013 19:33	John P Hook	1
07066	Silver	SW-846 6010B	1	132741848005	10/06/2013 22:13	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132741848005	10/04/2013 19:33	John P Hook	1
00259	Mercury	SW-846 7470A	1	132745713006	10/03/2013 05:41	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132741848005	10/02/2013 08:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132745713006	10/02/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-014(5.5-6.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218961
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30142 SDG#: PEL84-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13280807903A	10/07/2013 17:33	Michelle L Lalli	1

Sample Description: WS-012(1.5-2.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218962
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 09:00 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30121 SDG#: PEL84-03

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)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218962
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 09:00 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30121 SDG#: PEL84-03

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	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	0.0436	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)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218962
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 09:00 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30121 SDG#: PEL84-03

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	6.81	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	I132751AA	10/02/2013 16:17	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 16:17	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13275WAF026	10/05/2013 05:51	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13275WAF026	10/03/2013 09:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132796256001	10/06/2013 06:12	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132741848005	10/04/2013 19:44	John P Hook	1
07046	Barium	SW-846 6010B	1	132741848005	10/04/2013 19:44	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132741848005	10/04/2013 19:44	John P Hook	1
01750	Calcium	SW-846 6010B	1	132741848005	10/04/2013 19:44	John P Hook	1
07051	Chromium	SW-846 6010B	1	132741848005	10/04/2013 19:44	John P Hook	1
07055	Lead	SW-846 6010B	1	132741848005	10/04/2013 19:44	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132741848005	10/04/2013 19:44	John P Hook	1
07061	Nickel	SW-846 6010B	1	132741848005	10/04/2013 19:44	John P Hook	1
07036	Selenium	SW-846 6010B	1	132741848005	10/04/2013 19:44	John P Hook	1
07066	Silver	SW-846 6010B	1	132741848005	10/06/2013 22:24	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132741848005	10/04/2013 19:44	John P Hook	1
00259	Mercury	SW-846 7470A	1	132745713006	10/03/2013 05:43	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132741848005	10/02/2013 08:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132745713006	10/02/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-012(1.5-2.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218962
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 09:00 by DD

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 10/01/2013 10:00

Highlands Ranch CO 80129

Reported: 10/09/2013 09:01

30121 SDG#: PEL84-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13280807903A	10/07/2013 17:33	Michelle L Lalli	1

Sample Description: WS-012(5.0-5.5)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218963
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30122 SDG#: PEL84-04

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)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218963
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30122 SDG#: PEL84-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	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	0.0475	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)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218963
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30122 SDG#: PEL84-04

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	6.84	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.	1.6 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132751AA	10/02/2013 16:39	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 16:39	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13275WAF026	10/05/2013 06:20	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13275WAF026	10/03/2013 09:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132796256001	10/06/2013 06:12	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132741848005	10/04/2013 19:47	John P Hook	1
07046	Barium	SW-846 6010B	1	132741848005	10/04/2013 19:47	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132741848005	10/04/2013 19:47	John P Hook	1
01750	Calcium	SW-846 6010B	1	132741848005	10/04/2013 19:47	John P Hook	1
07051	Chromium	SW-846 6010B	1	132741848005	10/04/2013 19:47	John P Hook	1
07055	Lead	SW-846 6010B	1	132741848005	10/04/2013 19:47	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132741848005	10/04/2013 19:47	John P Hook	1
07061	Nickel	SW-846 6010B	1	132741848005	10/04/2013 19:47	John P Hook	1
07036	Selenium	SW-846 6010B	1	132741848005	10/04/2013 19:47	John P Hook	1
07066	Silver	SW-846 6010B	1	132741848005	10/06/2013 22:28	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132741848005	10/04/2013 19:47	John P Hook	1
00259	Mercury	SW-846 7470A	1	132745713006	10/03/2013 05:45	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132741848005	10/02/2013 08:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132745713006	10/02/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-012(5.0-5.5)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218963
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

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

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 10/01/2013 10:00

Highlands Ranch CO 80129

Reported: 10/09/2013 09:01

30122 SDG#: PEL84-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13280807903A	10/07/2013 17:33	Michelle L Lalli	1

Sample Description: WS-010(1.5-2.0)0993013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218964
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 09:25 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30101 SDG#: PEL84-05

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)0993013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218964
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 09:25 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30101 SDG#: PEL84-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.052	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	28.9	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0446	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(1.5-2.0)0993013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218964
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 09:25 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30101 SDG#: PEL84-05

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	
01750	Calcium	7440-70-2	6.57	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	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	I132751AA	10/02/2013 18:03	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 18:03	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13275WAF026	10/05/2013 06:50	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13275WAF026	10/03/2013 09:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132796256001	10/06/2013 06:12	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132741848005	10/04/2013 19:51	John P Hook	1
07046	Barium	SW-846 6010B	1	132741848005	10/04/2013 19:51	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132741848005	10/04/2013 19:51	John P Hook	1
01750	Calcium	SW-846 6010B	1	132741848005	10/04/2013 19:51	John P Hook	1
07051	Chromium	SW-846 6010B	1	132741848005	10/04/2013 19:51	John P Hook	1
07055	Lead	SW-846 6010B	1	132741848005	10/04/2013 19:51	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132741848005	10/04/2013 19:51	John P Hook	1
07061	Nickel	SW-846 6010B	1	132741848005	10/04/2013 19:51	John P Hook	1
07036	Selenium	SW-846 6010B	1	132741848005	10/04/2013 19:51	John P Hook	1
07066	Silver	SW-846 6010B	1	132741848005	10/06/2013 22:32	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132741848005	10/04/2013 19:51	John P Hook	1
00259	Mercury	SW-846 7470A	1	132745713006	10/03/2013 05:47	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132741848005	10/02/2013 08:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132745713006	10/02/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-010(1.5-2.0)0993013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218964
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 09:25 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30101 SDG#: PEL84-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13280807903A	10/07/2013 17:33	Michelle L Lalli	1

Sample Description: WS-010(3.5-4.0)0993013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218965
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 09:35 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30102 SDG#: PEL84-06

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)0993013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218965
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 09:35 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30102 SDG#: PEL84-06

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 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.

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	28.4	0.033	0.20

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

Sample Description: WS-010(3.5-4.0)0993013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218965
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 09:35 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30102 SDG#: PEL84-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0441	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.43	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.99	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0016 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
SW-846 7470A						
		mg/l	mg/l	mg/l		
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132751AA	10/02/2013 18:25	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 18:25	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13275WAF026	10/05/2013 07:19	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13275WAF026	10/03/2013 09:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132796256001	10/06/2013 06:12	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132741848005	10/04/2013 19:55	John P Hook	1
07046	Barium	SW-846 6010B	1	132741848005	10/04/2013 19:55	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132741848005	10/04/2013 19:55	John P Hook	1
01750	Calcium	SW-846 6010B	1	132741848005	10/04/2013 19:55	John P Hook	1
07051	Chromium	SW-846 6010B	1	132741848005	10/04/2013 19:55	John P Hook	1
07055	Lead	SW-846 6010B	1	132741848005	10/04/2013 19:55	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132741848005	10/04/2013 19:55	John P Hook	1
07061	Nickel	SW-846 6010B	1	132741848005	10/04/2013 19:55	John P Hook	1
07036	Selenium	SW-846 6010B	1	132741848005	10/04/2013 19:55	John P Hook	1
07066	Silver	SW-846 6010B	1	132741848005	10/06/2013 22:36	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132741848005	10/04/2013 19:55	John P Hook	1
00259	Mercury	SW-846 7470A	1	132745713006	10/03/2013 05:53	Damary Valentin	1

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

Sample Description: WS-010(3.5-4.0)0993013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218965
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 09:35 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30102 SDG#: PEL84-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132741848005	10/02/2013 08:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132745713006	10/02/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13280807903A	10/07/2013 17:33	Michelle L Lalli	1

Sample Description: WS-006(0.5-1.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218966
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 09:45 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30006 SDG#: PEL84-07

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

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

Sample Description: WS-006(0.5-1.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218966
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 09:45 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30006 SDG#: PEL84-07

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	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.						
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	28.9	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0408	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)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218966
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 09:45 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30006 SDG#: PEL84-07

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	6.54	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.	1.8 J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132751AA	10/02/2013 18:46	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 18:46	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13275WAF026	10/05/2013 07:49	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13275WAF026	10/03/2013 09:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132796256001	10/06/2013 06:12	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132741848005	10/04/2013 19:07	John P Hook	1
07046	Barium	SW-846 6010B	1	132741848005	10/04/2013 19:07	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132741848005	10/04/2013 19:07	John P Hook	1
01750	Calcium	SW-846 6010B	1	132741848005	10/04/2013 19:07	John P Hook	1
07051	Chromium	SW-846 6010B	1	132741848005	10/04/2013 19:07	John P Hook	1
07055	Lead	SW-846 6010B	1	132741848005	10/04/2013 19:07	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132741848005	10/04/2013 19:07	John P Hook	1
07061	Nickel	SW-846 6010B	1	132741848005	10/04/2013 19:07	John P Hook	1
07036	Selenium	SW-846 6010B	1	132741848005	10/04/2013 19:07	John P Hook	1
07066	Silver	SW-846 6010B	1	132741848005	10/06/2013 21:46	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132741848005	10/04/2013 19:07	John P Hook	1
00259	Mercury	SW-846 7470A	1	132745713006	10/03/2013 05:55	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132741848005	10/02/2013 08:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132745713006	10/02/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-006(0.5-1.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218966
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 09:45 by DD

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 10/01/2013 10:00

Highlands Ranch CO 80129

Reported: 10/09/2013 09:01

30006 SDG#: PEL84-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13280807903A	10/07/2013 17:33	Michelle L Lalli	1

Sample Description: WS-005(Surface)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218967
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 10:15 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30005 SDG#: PEL84-08

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)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218967
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 10:15 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30005 SDG#: PEL84-08

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	0.053	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	29.6	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	0.0482	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)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218967
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 10:15 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30005 SDG#: PEL84-08

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	6.87	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	I132751AA	10/02/2013 19:08	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 19:08	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13275WAF026	10/05/2013 08:19	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13275WAF026	10/03/2013 09:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132796256001	10/06/2013 06:12	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132741848005	10/04/2013 19:58	John P Hook	1
07046	Barium	SW-846 6010B	1	132741848005	10/04/2013 19:58	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132741848005	10/04/2013 19:58	John P Hook	1
01750	Calcium	SW-846 6010B	1	132741848005	10/04/2013 19:58	John P Hook	1
07051	Chromium	SW-846 6010B	1	132741848005	10/04/2013 19:58	John P Hook	1
07055	Lead	SW-846 6010B	1	132741848005	10/04/2013 19:58	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132741848005	10/04/2013 19:58	John P Hook	1
07061	Nickel	SW-846 6010B	1	132741848005	10/04/2013 19:58	John P Hook	1
07036	Selenium	SW-846 6010B	1	132741848005	10/04/2013 19:58	John P Hook	1
07066	Silver	SW-846 6010B	1	132741848005	10/06/2013 22:39	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132741848005	10/04/2013 19:58	John P Hook	1
00259	Mercury	SW-846 7470A	1	132745713006	10/03/2013 05:57	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132741848005	10/02/2013 08:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132745713006	10/02/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-005(Surface)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218967
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 10:15 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30005 SDG#: PEL84-08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13280807903A	10/07/2013 17:33	Michelle L Lalli	1

Sample Description: WS-002(Surface)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218968
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 10:40 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30002 SDG#: PEL84-09

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)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218968
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 10:40 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30002 SDG#: PEL84-09

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

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

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 CaCO ₃	471-34-1	30.7	0.033	0.20

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

Sample Description: WS-002(Surface)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218968
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 10:40 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30002 SDG#: PEL84-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0823	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.96	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	3.25	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0016 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
SW-846 7470A						
		mg/l	mg/l	mg/l		
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry						
		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132751AA	10/02/2013 19:29	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 19:29	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13275WAF026	10/05/2013 08:48	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13275WAF026	10/03/2013 09:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132796256001	10/06/2013 06:12	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132741848005	10/04/2013 20:02	John P Hook	1
07046	Barium	SW-846 6010B	1	132741848005	10/04/2013 20:02	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132741848005	10/04/2013 20:02	John P Hook	1
01750	Calcium	SW-846 6010B	1	132741848005	10/04/2013 20:02	John P Hook	1
07051	Chromium	SW-846 6010B	1	132741848005	10/04/2013 20:02	John P Hook	1
07055	Lead	SW-846 6010B	1	132741848005	10/04/2013 20:02	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132741848005	10/04/2013 20:02	John P Hook	1
07061	Nickel	SW-846 6010B	1	132741848005	10/04/2013 20:02	John P Hook	1
07036	Selenium	SW-846 6010B	1	132741848005	10/04/2013 20:02	John P Hook	1
07066	Silver	SW-846 6010B	1	132741848005	10/06/2013 22:43	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132741848005	10/04/2013 20:02	John P Hook	1
00259	Mercury	SW-846 7470A	1	132745713006	10/03/2013 06:06	Damary Valentin	1

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

Sample Description: WS-002 (Surface) 093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218968
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 10:40 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30002 SDG#: PEL84-09

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132741848005	10/02/2013 08:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132745713006	10/02/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13280807903A	10/07/2013 17:33	Michelle L Lalli	1

Sample Description: WS-011(1.5-2.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218969
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 10:50 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30111 SDG#: PEL84-10

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)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218969
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 10:50 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30111 SDG#: PEL84-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
The 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	30.1	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	0.0768	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-011(1.5-2.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218969
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 10:50 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30111 SDG#: PEL84-10

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	
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	3.17	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0016 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
SW-846 7470A						
	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	I132751AA	10/02/2013 19:50	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 19:50	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13275WAF026	10/05/2013 18:03	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13275WAF026	10/03/2013 09:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132796256001	10/06/2013 06:12	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132741848005	10/04/2013 20:06	John P Hook	1
07046	Barium	SW-846 6010B	1	132741848005	10/04/2013 20:06	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132741848005	10/04/2013 20:06	John P Hook	1
01750	Calcium	SW-846 6010B	1	132741848005	10/04/2013 20:06	John P Hook	1
07051	Chromium	SW-846 6010B	1	132741848005	10/04/2013 20:06	John P Hook	1
07055	Lead	SW-846 6010B	1	132741848005	10/04/2013 20:06	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132741848005	10/04/2013 20:06	John P Hook	1
07061	Nickel	SW-846 6010B	1	132741848005	10/04/2013 20:06	John P Hook	1
07036	Selenium	SW-846 6010B	1	132741848005	10/04/2013 20:06	John P Hook	1
07066	Silver	SW-846 6010B	1	132741848005	10/06/2013 22:47	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132741848005	10/04/2013 20:06	John P Hook	1
00259	Mercury	SW-846 7470A	1	132745713006	10/03/2013 06:08	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132741848005	10/02/2013 08:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132745713006	10/02/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-011(1.5-2.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218969
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 10:50 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30111 SDG#: PEL84-10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13280807903A	10/07/2013 17:33	Michelle L Lalli	1

Sample Description: WS-011(5.0-5.5)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218970
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:00 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30112 SDG#: PEL84-11

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)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218970
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:00 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30112 SDG#: PEL84-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.052	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.052	1
08357	Anthracene	120-12-7	N.D.	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.052	1
08357	Chrysene	218-01-9	N.D.	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.052	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.052	1
08357	Fluorene	86-73-7	N.D.	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.052	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.052	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.052	1
08357	Pyrene	129-00-0	N.D.	0.010	0.052	1
The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.						
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	0.0731	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-011(5.0-5.5)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218970
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:00 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30112 SDG#: PEL84-11

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	
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	3.15	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						
	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	I132751AA	10/02/2013 20:11	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 20:11	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13275WAF026	10/05/2013 18:33	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13275WAF026	10/03/2013 09:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132796256001	10/06/2013 06:12	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132741848005	10/04/2013 20:09	John P Hook	1
07046	Barium	SW-846 6010B	1	132741848005	10/04/2013 20:09	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132741848005	10/04/2013 20:09	John P Hook	1
01750	Calcium	SW-846 6010B	1	132741848005	10/04/2013 20:09	John P Hook	1
07051	Chromium	SW-846 6010B	1	132741848005	10/04/2013 20:09	John P Hook	1
07055	Lead	SW-846 6010B	1	132741848005	10/04/2013 20:09	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132741848005	10/04/2013 20:09	John P Hook	1
07061	Nickel	SW-846 6010B	1	132741848005	10/04/2013 20:09	John P Hook	1
07036	Selenium	SW-846 6010B	1	132741848005	10/04/2013 20:09	John P Hook	1
07066	Silver	SW-846 6010B	1	132741848005	10/06/2013 22:51	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132741848005	10/04/2013 20:09	John P Hook	1
00259	Mercury	SW-846 7470A	1	132745713006	10/03/2013 06:10	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132741848005	10/02/2013 08:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132745713006	10/02/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-011(5.0-5.5)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218970
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:00 by DD

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 10/01/2013 10:00

Highlands Ranch CO 80129

Reported: 10/09/2013 09:01

30112 SDG#: PEL84-11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13280807903A	10/07/2013 17:33	Michelle L Lalli	1

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

Sample Description: WS-018(Surface)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218971
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:25 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30018 SDG#: PEL84-12

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)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218971
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:25 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30018 SDG#: PEL84-12

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

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

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 CaCO ₃	471-34-1	30.6	0.033	0.20

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

Sample Description: WS-018(Surface)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218971
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:25 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30018 SDG#: PEL84-12

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	0.0608	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
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	3.22	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	I132751AA	10/02/2013 20:32	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 20:32	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13275WAF026	10/05/2013 19:02	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13275WAF026	10/03/2013 09:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132796256001	10/06/2013 06:12	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132741848005	10/04/2013 20:13	John P Hook	1
07046	Barium	SW-846 6010B	1	132741848005	10/04/2013 20:13	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132741848005	10/04/2013 20:13	John P Hook	1
01750	Calcium	SW-846 6010B	1	132741848005	10/04/2013 20:13	John P Hook	1
07051	Chromium	SW-846 6010B	1	132741848005	10/04/2013 20:13	John P Hook	1
07055	Lead	SW-846 6010B	1	132741848005	10/04/2013 20:13	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132741848005	10/04/2013 20:13	John P Hook	1
07061	Nickel	SW-846 6010B	1	132741848005	10/04/2013 20:13	John P Hook	1
07036	Selenium	SW-846 6010B	1	132741848005	10/04/2013 20:13	John P Hook	1
07066	Silver	SW-846 6010B	1	132741848005	10/06/2013 22:55	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132741848005	10/04/2013 20:13	John P Hook	1
00259	Mercury	SW-846 7470A	1	132745713006	10/03/2013 06:12	Damary Valentin	1

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

Sample Description: WS-018 (Surface) 093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218971
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:25 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30018 SDG#: PEL84-12

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	132741848005	10/02/2013 08:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132745713006	10/02/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13280807903A	10/07/2013 17:33	Michelle L Lalli	1

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

Sample Description: WS-003(Surface)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218972
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:35 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30003 SDG#: PEL84-13

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

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

Sample Description: WS-003 (Surface) 093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218972
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:35 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30003 SDG#: PEL84-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.019 J	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.017 J	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.041 J	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.017 J	0.010	0.051	1
08357	Chrysene	218-01-9	0.021 J	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	0.017 J	0.010	0.051	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials with the exception of:
Benzo(b)fluoranthene .02 ug/l
was the only compound detected in the re-extraction.

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

Sample Description: WS-003(Surface)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218972
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:35 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30003 SDG#: PEL84-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SM 2340 B-1997		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	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	0.0691	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.91	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	I132751AA	10/02/2013 20:53	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 20:53	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13275WAF026	10/05/2013 19:32	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13275WAF026	10/03/2013 09:10	Anna E Stager	1
06256	Total Hardness as CaCO ₃	SM 2340 B-1997	1	132796256001	10/06/2013 06:12	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132741848005	10/04/2013 20:17	John P Hook	1
07046	Barium	SW-846 6010B	1	132741848005	10/04/2013 20:17	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132741848005	10/04/2013 20:17	John P Hook	1
01750	Calcium	SW-846 6010B	1	132741848005	10/04/2013 20:17	John P Hook	1
07051	Chromium	SW-846 6010B	1	132741848005	10/04/2013 20:17	John P Hook	1
07055	Lead	SW-846 6010B	1	132741848005	10/04/2013 20:17	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132741848005	10/04/2013 20:17	John P Hook	1
07061	Nickel	SW-846 6010B	1	132741848005	10/04/2013 20:17	John P Hook	1
07036	Selenium	SW-846 6010B	1	132741848005	10/04/2013 20:17	John P Hook	1

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

Sample Description: WS-003 (Surface) 093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218972
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:35 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30003 SDG#: PEL84-13

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010B	1	132741848005	10/06/2013 22:58	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132741848005	10/04/2013 20:17	John P Hook	1
00259	Mercury	SW-846 7470A	1	132745713006	10/03/2013 06:18	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132741848005	10/02/2013 08:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132745713006	10/02/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13280807903A	10/07/2013 17:33	Michelle L Lalli	1

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

Sample Description: WS-007(0.5-1.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218973
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:45 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30007 SDG#: PEL84-14

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

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

Sample Description: WS-007(0.5-1.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218973
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:45 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30007 SDG#: PEL84-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	0.014 J	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.						
Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	22.7	0.033	0.20	1
	SW-846 6010B	mg/l	mg/l	mg/l		
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0475	0.00033	0.0050	1
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)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218973
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:45 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30007 SDG#: PEL84-14

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	5.47	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	2.21	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0023 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry		EPA 1664A	mg/l	mg/l	mg/l	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132751AA	10/02/2013 21:15	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 21:15	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13275WAF026	10/05/2013 20:01	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13275WAF026	10/03/2013 09:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132796256001	10/06/2013 06:12	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132741848005	10/04/2013 20:28	John P Hook	1
07046	Barium	SW-846 6010B	1	132741848005	10/04/2013 20:28	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132741848005	10/04/2013 20:28	John P Hook	1
01750	Calcium	SW-846 6010B	1	132741848005	10/04/2013 20:28	John P Hook	1
07051	Chromium	SW-846 6010B	1	132741848005	10/04/2013 20:28	John P Hook	1
07055	Lead	SW-846 6010B	1	132741848005	10/04/2013 20:28	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132741848005	10/04/2013 20:28	John P Hook	1
07061	Nickel	SW-846 6010B	1	132741848005	10/04/2013 20:28	John P Hook	1
07036	Selenium	SW-846 6010B	1	132741848005	10/04/2013 20:28	John P Hook	1
07066	Silver	SW-846 6010B	1	132741848005	10/06/2013 23:09	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132741848005	10/04/2013 20:28	John P Hook	1
00259	Mercury	SW-846 7470A	1	132745713006	10/03/2013 06:20	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132741848005	10/02/2013 08:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132745713006	10/02/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-007(0.5-1.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218973
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:45 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30007 SDG#: PEL84-14

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13280807903A	10/07/2013 17:33	Michelle L Lalli	1

Sample Description: WS-001(0.5-1.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218974
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:55 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30001 SDG#: PEL84-15

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

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

Sample Description: WS-001(0.5-1.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218974
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:55 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30001 SDG#: PEL84-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.050	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.050	1
08357	Anthracene	120-12-7	N.D.	0.010	0.050	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.050	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.050	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.050	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.050	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.050	1
08357	Chrysene	218-01-9	N.D.	0.010	0.050	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.050	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.050	1
08357	Fluorene	86-73-7	N.D.	0.010	0.050	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.050	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.050	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.050	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.050	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.050	1
08357	Pyrene	129-00-0	0.011 J	0.010	0.050	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials with the exception of:
pyrene was not detected in the re-extraction.

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l
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*=This limit was used in the evaluation of the final result

Sample Description: WS-001(0.5-1.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218974
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:55 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30001 SDG#: PEL84-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SM 2340 B-1997		mg/l	mg/l	mg/l	
06256	Total Hardness as CaCO ₃	471-34-1	29.3	0.033	0.20	1
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0416	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.65	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	3.09	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	I132751AA	10/02/2013 21:36	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 21:36	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13275WAF026	10/05/2013 20:31	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13275WAF026	10/03/2013 09:10	Anna E Stager	1
06256	Total Hardness as CaCO ₃	SM 2340 B-1997	1	132796256001	10/06/2013 06:12	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132741848005	10/04/2013 20:31	John P Hook	1
07046	Barium	SW-846 6010B	1	132741848005	10/04/2013 20:31	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132741848005	10/04/2013 20:31	John P Hook	1
01750	Calcium	SW-846 6010B	1	132741848005	10/04/2013 20:31	John P Hook	1
07051	Chromium	SW-846 6010B	1	132741848005	10/04/2013 20:31	John P Hook	1
07055	Lead	SW-846 6010B	1	132741848005	10/04/2013 20:31	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132741848005	10/04/2013 20:31	John P Hook	1
07061	Nickel	SW-846 6010B	1	132741848005	10/04/2013 20:31	John P Hook	1
07036	Selenium	SW-846 6010B	1	132741848005	10/04/2013 20:31	John P Hook	1

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

Sample Description: WS-001(0.5-1.0)093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218974
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 11:55 by DD

ExxonMobil c/o Arcadis

630 Plaza Drive, Suite 600

Submitted: 10/01/2013 10:00

Highlands Ranch CO 80129

Reported: 10/09/2013 09:01

30001 SDG#: PEL84-15

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010B	1	132741848005	10/06/2013 23:13	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132741848005	10/04/2013 20:31	John P Hook	1
00259	Mercury	SW-846 7470A	1	132745713006	10/03/2013 06:22	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132741848005	10/02/2013 08:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132745713006	10/02/2013 15:20	Nelli S Markaryan	1
08079	HEM (oil & grease)	EPA 1664A	1	13280807903A	10/07/2013 17:33	Michelle L Lalli	1

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

Sample Description: WS-EB-77-093013 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218975
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 13:00 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30E77 SDG#: PEL84-16EB

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-77-093013 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218975
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 13:00 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30E77 SDG#: PEL84-16EB

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	1.6	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	0.0028 J	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1

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

Sample Description: WS-EB-77-093013 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218975
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 13:00 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30E77 SDG#: PEL84-16EB

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	0.475	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	0.0981 J	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132751AA	10/02/2013 14:52	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 14:52	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13275WAF026	10/05/2013 21:00	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13275WAF026	10/03/2013 09:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132796256001	10/06/2013 06:12	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132741848005	10/04/2013 20:35	John P Hook	1
07046	Barium	SW-846 6010B	1	132741848005	10/04/2013 20:35	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132741848005	10/04/2013 20:35	John P Hook	1
01750	Calcium	SW-846 6010B	1	132741848005	10/04/2013 20:35	John P Hook	1
07051	Chromium	SW-846 6010B	1	132741848005	10/04/2013 20:35	John P Hook	1
07055	Lead	SW-846 6010B	1	132741848005	10/04/2013 20:35	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132741848005	10/04/2013 20:35	John P Hook	1
07061	Nickel	SW-846 6010B	1	132741848005	10/04/2013 20:35	John P Hook	1
07036	Selenium	SW-846 6010B	1	132741848005	10/04/2013 20:35	John P Hook	1
07066	Silver	SW-846 6010B	1	132741848005	10/06/2013 23:17	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132741848005	10/04/2013 20:35	John P Hook	1
00259	Mercury	SW-846 7470A	1	132745713006	10/03/2013 06:24	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132741848005	10/02/2013 08:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132745713006	10/02/2013 15:20	Nelli S Markaryan	1

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

Sample Description: DUP-WS-95-093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218976
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30D95 SDG#: PEL84-17FD

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

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

Sample Description: DUP-WS-95-093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218976
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30D95 SDG#: PEL84-17FD

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.	0.012	0.059	1
08357	Acenaphthylene	208-96-8	N.D.	0.012	0.059	1
08357	Anthracene	120-12-7	N.D.	0.012	0.059	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.012	0.059	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.012	0.059	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.012	0.059	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.012	0.059	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.012	0.059	1
08357	Chrysene	218-01-9	N.D.	0.012	0.059	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.012	0.059	1
08357	Fluoranthene	206-44-0	N.D.	0.012	0.059	1
08357	Fluorene	86-73-7	N.D.	0.012	0.059	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.012	0.059	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.012	0.059	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.012	0.059	1
08357	Naphthalene	91-20-3	N.D.	0.036	0.059	1
08357	Phenanthrene	85-01-8	N.D.	0.036	0.059	1
08357	Pyrene	129-00-0	N.D.	0.012	0.059	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	0.0421	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

Sample Description: DUP-WS-95-093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218976
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 by DD

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

Submitted: 10/01/2013 10:00

Reported: 10/09/2013 09:01

30D95 SDG#: PEL84-17FD

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	6.78	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	3.14	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	I132751AA	10/02/2013 21:57	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 21:57	Jason M Long	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13275WAF026	10/05/2013 21:30	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13275WAF026	10/03/2013 09:10	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132796256001	10/06/2013 06:12	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132741848005	10/04/2013 20:39	John P Hook	1
07046	Barium	SW-846 6010B	1	132741848005	10/04/2013 20:39	John P Hook	1
07049	Cadmium	SW-846 6010B	1	132741848005	10/04/2013 20:39	John P Hook	1
01750	Calcium	SW-846 6010B	1	132741848005	10/04/2013 20:39	John P Hook	1
07051	Chromium	SW-846 6010B	1	132741848005	10/04/2013 20:39	John P Hook	1
07055	Lead	SW-846 6010B	1	132741848005	10/04/2013 20:39	John P Hook	1
01757	Magnesium	SW-846 6010B	1	132741848005	10/04/2013 20:39	John P Hook	1
07061	Nickel	SW-846 6010B	1	132741848005	10/04/2013 20:39	John P Hook	1
07036	Selenium	SW-846 6010B	1	132741848005	10/04/2013 20:39	John P Hook	1
07066	Silver	SW-846 6010B	1	132741848005	10/06/2013 23:21	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	132741848005	10/04/2013 20:39	John P Hook	1
00259	Mercury	SW-846 7470A	1	132745713006	10/03/2013 06:26	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132741848005	10/02/2013 08:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132745713006	10/02/2013 15:20	Nelli S Markaryan	1

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

Sample Description: DUP-WS-95-093013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218976
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013 by DD

ExxonMobil c/o Arcadis

Submitted: 10/01/2013 10:00

630 Plaza Drive, Suite 600

Reported: 10/09/2013 09:01

Highlands Ranch CO 80129

30D95 SDG#: PEL84-17FD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08079	HEM (oil & grease)	EPA 1664A	1	13280807903A	10/07/2013 17:33	Michelle L Lalli	1

Sample Description: WS-TB-164-093013 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218977
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013

ExxonMobil c/o Arcadis

Submitted: 10/01/2013 10:00

630 Plaza Drive, Suite 600

Reported: 10/09/2013 09:01

Highlands Ranch CO 80129

30164 SDG#: PEL84-18TB*

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-164-093013 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7218977
LL Group # 1422681
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 09/30/2013

ExxonMobil c/o Arcadis

Submitted: 10/01/2013 10:00

630 Plaza Drive, Suite 600

Reported: 10/09/2013 09:01

Highlands Ranch CO 80129

30164 SDG#: PEL84-18TB*

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

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132751AA	10/02/2013 15:14	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132751AA	10/02/2013 15:14	Jason M Long	1

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 10/09/13 at 09:01 AM

Group Number: 1422681

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: I132751AA	Sample number(s): 7218960-7218977								
Acetone	N.D.	3.0	5.0	ug/l	115		60-139		
Allyl Chloride	N.D.	0.1	0.5	ug/l	92		61-130		
Benzene	N.D.	0.1	0.5	ug/l	97		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	95		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	93		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	93		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	89		73-128		
Bromomethane	N.D.	0.1	0.5	ug/l	84		62-126		
2-Butanone	N.D.	1.0	5.0	ug/l	117		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	97		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	94		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	90		80-129		
Chlorobenzene	N.D.	0.1	0.5	ug/l	93		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	89		68-120		
Chloroform	N.D.	0.1	0.5	ug/l	96		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	85		55-120		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	96		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	96		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	106		64-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	93		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	97		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	96		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	99		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	98		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	98		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	62		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	101		80-120		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	100		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	95		80-123		
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	94		80-120		
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	94		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	103		80-120		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	100		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	85		75-122		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	92		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	93		80-120		
Ethyl ether	N.D.	0.1	0.5	ug/l	94		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	94		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	87		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	89		73-120		

*- Outside of specification

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

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

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

Quality Control SummaryClient Name: ExxonMobil c/o Arcadis
Reported: 10/09/13 at 09:01 AM

Group Number: 1422681

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Isopropylbenzene	N.D.	0.1	0.5	ug/l	92		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	94		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	92		80-120		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	103		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	99		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	99		80-120		
Styrene	N.D.	0.1	0.5	ug/l	93		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	92		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	110		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	87		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	108		65-131		
Toluene	N.D.	0.1	0.5	ug/l	92		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	100		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	94		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	91		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	101		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	93		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	105		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	98		80-120		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	98		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	84		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	91		80-120		

Batch number: 13275WAF026	Sample number(s): 7218960-7218976								
Acenaphthene	0.012 J	0.010	0.050	ug/l	96	96	77-118	0	30
Acenaphthylene	N.D.	0.010	0.050	ug/l	105	105	80-123	0	30
Anthracene	N.D.	0.010	0.050	ug/l	101	103	78-123	2	30
Benzo(a)anthracene	0.010 J	0.010	0.050	ug/l	98	99	73-127	1	30
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	103	106	72-120	3	30
Benzo(b)fluoranthene	0.010 J	0.010	0.050	ug/l	112	116	79-136	3	30
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	99	103	64-130	4	30
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	101	108	73-131	7	30
Chrysene	0.010 J	0.010	0.050	ug/l	103	103	76-125	0	30
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	96	99	58-131	3	30
Fluoranthene	0.024 J	0.010	0.050	ug/l	107	109	79-124	2	30
Fluorene	N.D.	0.010	0.050	ug/l	101	102	74-115	0	30
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	98	100	62-130	2	30
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	108	109	80-126	1	30
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	106	106	81-124	1	30
Naphthalene	N.D.	0.030	0.050	ug/l	101	102	75-120	1	30
Phenanthrene	0.043 J	0.030	0.050	ug/l	101	104	75-120	3	30
Pyrene	0.032 J	0.010	0.050	ug/l	104	106	71-130	2	30

Batch number: 132741848005	Sample number(s): 7218960-7218976								
Arsenic	N.D.	0.0068	0.0200	mg/l	101		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	103		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	104		90-112		
Calcium	0.0465 J	0.0334	0.200	mg/l	104		90-112		
Chromium	N.D.	0.0016	0.0150	mg/l	103		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	99		88-110		
Magnesium	N.D.	0.0167	0.100	mg/l	102		89-110		
Nickel	N.D.	0.0015	0.0100	mg/l	105		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	100		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	104		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	104		90-110		

*- Outside of specification

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 10/09/13 at 09:01 AM

Group Number: 1422681

<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: 132745713006 Mercury	Sample number(s): 7218960-7218976 N.D.	0.00006	0.00020	mg/l	95		80-120		
Batch number: 13280807903A HEM (oil & grease)	Sample number(s): 7218960-7218974, 7218976 N.D.	1.4	5.0	mg/l	93	96	78-114	3	16

Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: I132751AA	Sample number(s): 7218960-7218977 UNSPK: 7218960								
Acetone	102	116	57-163	12	30				
Allyl Chloride	103	102	56-160	1	30				
Benzene	107	104	87-126	2	30				
Bromobenzene	99	98	80-123	1	30				
Bromochloromethane	97	98	82-125	0	30				
Bromodichloromethane	97	96	82-133	1	30				
Bromoform	89	87	60-138	2	30				
Bromomethane	87	88	66-130	1	30				
2-Butanone	97	110	56-160	13	30				
n-Butylbenzene	111	109	83-131	2	30				
sec-Butylbenzene	108	107	84-128	1	30				
tert-Butylbenzene	103	102	84-135	0	30				
Carbon Tetrachloride	104	102	81-148	2	30				
Chlorobenzene	102	100	78-133	2	30				
Chloroethane	94	94	70-139	0	30				
Chloroform	105	103	86-136	2	30				
Chloromethane	88	86	49-135	2	30				
2-Chlorotoluene	103	102	75-134	1	30				
4-Chlorotoluene	103	102	76-134	1	30				
1,2-Dibromo-3-chloropropane	90	98	43-143	9	30				
Dibromochloromethane	94	94	79-125	0	30				
1,2-Dibromoethane	100	99	84-127	1	30				
Dibromomethane	100	100	83-126	1	30				
1,2-Dichlorobenzene	103	102	83-117	2	30				
1,3-Dichlorobenzene	104	104	79-132	0	30				
1,4-Dichlorobenzene	103	102	79-120	1	30				
Dichlorodifluoromethane	65	63	28-136	4	30				
1,1-Dichloroethane	110	107	88-136	3	30				
1,2-Dichloroethane	105	103	82-135	2	30				
1,1-Dichloroethene	110	108	83-150	2	30				
cis-1,2-Dichloroethene	102	101	82-129	2	30				
trans-1,2-Dichloroethene	106	103	88-127	2	30				
Dichlorofluoromethane	103	103	81-161	0	30				
1,2-Dichloropropane	111	109	91-126	2	30				
1,3-Dichloropropane	105	103	80-127	2	30				
2,2-Dichloropropane	101	100	80-134	1	30				
1,1-Dichloropropene	107	104	86-139	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: 10/09/13 at 09:01 AM

Group Number: 1422681

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
cis-1,3-Dichloropropene	102	102	74-132	0	30				
trans-1,3-Dichloropropene	96	96	71-128	0	30				
Ethyl ether	95	94	57-139	1	30				
Ethylbenzene	104	101	80-140	3	30				
Freon 113	107	99	77-147	8	30				
Hexachlorobutadiene	103	103	65-128	1	30				
Isopropylbenzene	103	100	81-133	3	30				
p-Isopropyltoluene	106	104	84-124	2	30				
Methyl Tertiary Butyl Ether	94	95	82-132	2	30				
4-Methyl-2-Pentanone	106	104	69-149	2	30				
Methylene Chloride	107	107	77-135	0	30				
n-Propylbenzene	109	109	79-131	1	30				
Styrene	100	98	63-151	2	30				
1,1,1,2-Tetrachloroethane	98	96	87-126	2	30				
1,1,2,2-Tetrachloroethane	110	108	75-131	1	30				
Tetrachloroethene	99	97	75-129	2	30				
Tetrahydrofuran	90	100	56-154	11	30				
Toluene	102	100	83-127	2	30				
1,2,3-Trichlorobenzene	103	102	73-125	0	30				
1,2,4-Trichlorobenzene	100	99	77-120	1	30				
1,1,1-Trichloroethane	103	101	85-140	2	30				
1,1,2-Trichloroethane	104	103	85-129	1	30				
Trichloroethene	105	102	85-131	3	30				
Trichlorofluoromethane	99	92	73-139	8	30				
1,2,3-Trichloropropane	104	103	76-120	1	30				
1,2,4-Trimethylbenzene	105	105	87-126	0	30				
1,3,5-Trimethylbenzene	106	105	89-129	1	30				
Vinyl Chloride	92	90	62-135	2	30				
Xylene (Total)	101	99	81-137	2	30				

Batch number: 132741848005	Sample number(s): 7218960-7218976 UNSPK: 7218966 BKG: 7218966								
Arsenic	104	103	81-123	0	20	N.D.	N.D.	0 (1)	20
Barium	104	103	78-118	0	20	0.0408	0.0412	1	20
Cadmium	104	104	83-116	0	20	N.D.	N.D.	0 (1)	20
Calcium	105	101	75-125	2	20	6.54	6.71	3	20
Chromium	103	103	76-120	0	20	N.D.	N.D.	0 (1)	20
Lead	100	98	75-125	1	20	N.D.	N.D.	0 (1)	20
Magnesium	104	100	75-125	1	20	3.04	3.12	3	20
Nickel	105	105	86-115	0	20	N.D.	N.D.	0 (1)	20
Selenium	100	99	75-125	1	20	N.D.	N.D.	0 (1)	20
Silver	100	102	75-125	2	20	N.D.	N.D.	0 (1)	20
Vanadium	105	105	90-117	0	20	N.D.	N.D.	0 (1)	20

Batch number: 132745713006	Sample number(s): 7218960-7218976 UNSPK: 7218967 BKG: 7218967								
Mercury	95	95	80-120	0	20	N.D.	N.D.	0 (1)	20

Batch number: 13280807903A	Sample number(s): 7218960-7218974,7218976 UNSPK: 7218962								
HEM (oil & grease)	88		78-114						

*- 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: 10/09/13 at 09:01 AM

Group Number: 1422681

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: I132751AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7218960	99	105	99	97
7218961	99	105	99	97
7218962	99	106	99	97
7218963	99	108	100	97
7218964	99	108	99	98
7218965	99	106	99	98
7218966	99	108	99	97
7218967	99	103	100	97
7218968	99	107	99	97
7218969	99	107	100	97
7218970	99	105	99	97
7218971	99	103	100	96
7218972	99	105	99	97
7218973	99	104	99	96
7218974	100	105	99	96
7218975	98	106	100	97
7218976	99	105	99	97
7218977	98	105	99	96
Blank	98	104	99	96
LCS	100	102	100	99
MS	101	106	100	101
MSD	100	106	100	100
Limits:	77-114	74-113	77-110	78-110

Analysis Name: PAHs in waters by SIM

Batch number: 13275WAF026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7218960	105	81	105
7218961	97	76	95
7218962	96	74	104
7218963	95	69	99
7218964	97	65	100
7218965	93	55*	101
7218966	94	63	100
7218967	99	72	96
7218968	88	50*	95
7218969	96	67	100
7218970	97	62	98
7218971	94	55*	94
7218972	102	68	101
7218973	82	81	97
7218974	100	65	101
7218975	106	104	102
7218976	101	78	103
Blank	104	105	104
LCS	97	100	104

*- 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: 10/09/13 at 09:01 AM

Group Number: 1422681

Surrogate Quality Control

LCSD	98	102	104
Limits:	44-137	62-141	51-136

*- Outside of specification

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

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

eurofins

Acct. # 14739

Group # 1422681 Sample # 7218960-77

Instructions on reverse side correspond with circled numbers

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

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

Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only
Group # 1422681 Sample # 7218960-77
Instructions on reverse side correspond with circled numbers.

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.

Rachel L. Kreamer

A# 14739 Gr# 1422681 Samples 7218460-77

From: Mott, Lyndi [Lyndi.Mott@arcadis-us.com]
Sent: Wednesday, October 02, 2013 9:18 AM
To: Rachel L. Kreamer
Cc: Kathy Klinefelter
Subject: RE: Samples received 10/1

Rachel,

The collection time for WS-012(1.5-2) is 0900. If you received all the metals bottles for this location, then the metals bottles labeled WS-012(1.5-2) collected at 0910 can be assumed to be WS-012(5-5.5).

The O&G bottle labeled WS-012(5-5.5) should have a collection time of 0910.

Lyndi Mott

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

From: Rachel L. Kreamer [mailto:RKreamer@lancasterlabs.com]
Sent: Wednesday, October 02, 2013 7:06 AM
To: Mott, Lyndi
Cc: Kathy Klinefelter
Subject: Samples received 10/1

Good morning.

There was a labeling and collection time discrepancy on bottle labels for samples received yesterday. The details are in the attached doc log. We had all the bottles for WS-012(1.5-2.0), collection time of 9:00 so we think the metals bottle for WS-012(5.0-5.5) had the wrong depth on the label and the O&G bottle for the same sample had the wrong collection time. We'll go ahead with analyses unless you indicate otherwise.

Thanks
Rachel

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

From: 39Scanner@lancasterlabs.com [mailto:39Scanner@lancasterlabs.com]
Sent: Wednesday, October 02, 2013 7:58 AM
To: Rachel L. Kreamer
Subject:

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

Scan Date: 10.02.2013 07:57:43 (-0400)
Queries to: 39Scanner@lancasterlabs.com

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Environmental Sample Administration 1422681
Receipt Documentation LogClient/Project: MayflowerShipping Container Sealed: YES NODate of Receipt: 10/1/13Custody Seal Present *: YES NOTime of Receipt: 1000

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

Source Code: 60-1Package: Chilled Not Chilled

Temperature of Shipping Containers

Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT146	2.7	TB	WI	Y	B	
2		0.6					
3		1.1					
4		0.5					
5		1.0					
6		0.4					

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

Paperwork Discrepancy/Unpacking Problems:

metals bottle labeled WS-012 (1.5-2.0) @ 910 = WS-012 (5.0-5.5) @ 910
1 O+G jar for WS-012 (5.0-5.5) collection time = 0900
G.1422681

Unpacker Signature/Emp#: C. Eshel 3647 Date/Time: 10/1/13 1038

Issued by Dept. 6042 Management

2174.06

Explanation of Symbols and Abbreviations

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

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

Data Qualifiers:

C – result confirmed by reanalysis.

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

U.S. EPA CLP Data Qualifiers:

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

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

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

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

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

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