ANALYTICAL RESULTS

Prepared by:

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2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

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

August 26, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 08/17/2013
Group Number: 1412295
SDG: PEK75
PO Number: B0086003.1301
State of Sample Origin: AR

Client Sample Description	Lancaster Labs (LL) #
WS-014(1.5-2.0)081613 Grab Surface Water	7165470
WS-014(5.5-6.0)081613 Grab Surface Water	7165471
WS-012(1.5-2.0)081613 Grab Surface Water	7165472
WS-012(5.0-5.5)081613 Grab Surface Water	7165473
WS-010(1.5-2.0)081613 Grab Surface Water	7165474
WS-010(3.5-4.0)081613 Grab Surface Water	7165475
WS-006(0.5-1.0)081613 Grab Surface Water	7165476
WS-006(0.5-1.0)081613MS Grab Surface Water	7165477
WS-006(0.5-1.0)081613MSD Grab Surface Water	7165478
WS-006(0.5-1.0)081613DUP Grab Surface Water	7165479
WS-005(Surface)081613 Grab Surface Water	7165480
WS-002(Surface)081613 Grab Surface Water	7165481
WS-018(Surface)081613 Grab Surface Water	7165482
WS-011(1.5-2.0)081613 Grab Surface Water	7165483
WS-011(5.0-5.5)081613 Grab Surface Water	7165484
WS-003(Surface)081613 Grab Surface Water	7165485
WS-007(0.5-1.0)081613 Grab Surface Water	7165486
WS-001(0.5-1.0)081613 Grab Surface Water	7165487
WS-BKG-002(Surface)081613 Grab Surface Water	7165488
WS-EB-31-081613 Grab Water	7165489
WS-TB-125-081613 Water	7165490

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

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

Respectfully Submitted,

Katherine A. Klinefelter

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1412295

General Comments:

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

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

Project specific QC samples are included in this data set

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

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

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

Analysis Specific Comments:

SW-846 8260B 25mL purge, GC/MS Volatiles

Batch #: I132312AA (Sample number(s): 7165470-7165478, 7165480-7165490 UNSPK: 7165476)

The recovery(ies) for the following analyte(s) in the LCS were below the acceptance window: Vinyl Chloride, Chloroethane

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: Bromomethane, Chloroethane

Sample #s: 7165470, 7165471, 7165472, 7165473, 7165474, 7165475, 7165476, 7165477, 7165478, 7165480, 7165481, 7165482, 7165483, 7165484, 7165485, 7165486, 7165487, 7165488, 7165489, 7165490

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.

SW-846 8270C SIM, GC/MS Semivolatiles

Batch #: 13231WAG026 (Sample number(s): 7165470-7165478, 7165480-7165489 UNSPK: 7165476)

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: Anthracene, Benzo(a)pyrene

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7165470, 7165471, 7165476, 7165480, 7165481, 7165482, 7165483, 7165484, 7165485

Sample #s: 7165470, 7165471, 7165476, 7165480, 7165481, 7165482, 7165483, 7165484, 7165485

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.

EPA 1664A, Wet Chemistry

Batch #: 13235807901A (Sample number(s): 7165470-7165488 UNSPK: 7165476 BKG: 7165476)

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

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

Sample Description: WS-014(1.5-2.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165470
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 08:25 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS014 SDG#: PEK75-01

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

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

Sample Description: WS-014(1.5-2.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165470
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 08:25 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS014 SDG#: PEK75-01

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 purge**		**ug/l**	**ug/l**	**ug/l**	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	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

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.

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.

Metals	**SM 2340 B-1997**		**mg/l**	**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	27.0	0.033	0.20	1

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

Sample Description: WS-014(1.5-2.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165470
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 08:25 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS014 SDG#: PEK75-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0429	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.15	0.0334	0.200	1
07051	Chromium	7440-47-3	0.0017 J	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.83	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry	**EPA 1664A**		**mg/l**	**mg/l**	**mg/l**	
08079	HEM (oil & grease)	n.a.	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	I132312AA	08/19/2013 23:58	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/19/2013 23:58	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 05:11	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 07:51	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 07:51	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 07:51	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 07:51	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 07:51	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 07:51	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 07:51	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 07:51	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 07:51	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 07:51	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 07:51	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 09:21	Damary Valentin	1

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

Sample Description: WS-014(1.5-2.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165470
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 08:25 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS014 SDG#: PEK75-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132311848001	08/20/2013 10:24	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-014(5.5-6.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165471
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 08:35 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

W-014 SDG#: PEK75-02

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

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

Sample Description: WS-014(5.5-6.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165471
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 08:35 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

W-014 SDG#: PEK75-02

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 purge**		**ug/l**	**ug/l**	**ug/l**	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	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

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.

GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.055	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.055	1
08357	Anthracene	120-12-7	N.D.	0.011	0.055	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.055	1
08357	Benzo(a)pyrene	50-32-8	0.014 J	0.011	0.055	1
08357	Benzo(b)fluoranthene	205-99-2	0.013 J	0.011	0.055	1
08357	Benzo(g,h,i)perylene	191-24-2	0.016 J	0.011	0.055	1
08357	Benzo(k)fluoranthene	207-08-9	0.014 J	0.011	0.055	1
08357	Chrysene	218-01-9	N.D.	0.011	0.055	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.055	1
08357	Fluoranthene	206-44-0	0.011 J	0.011	0.055	1
08357	Fluorene	86-73-7	N.D.	0.011	0.055	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.019 J	0.011	0.055	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.055	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.055	1
08357	Naphthalene	91-20-3	N.D.	0.033	0.055	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.055	1
08357	Pyrene	129-00-0	N.D.	0.011	0.055	1

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

Metals	**SM 2340 B-1997**		**mg/l**	**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	27.2	0.033	0.20	1

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

Sample Description: WS-014(5.5-6.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165471
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 08:35 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

W-014 SDG#: PEK75-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0431	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.18	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.86	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry	**EPA 1664A**		**mg/l**	**mg/l**	**mg/l**	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132312AA	08/20/2013 00:20	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/20/2013 00:20	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 05:41	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 07:55	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 07:55	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 07:55	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 07:55	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 07:55	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 07:55	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 07:55	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 07:55	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 07:55	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 07:55	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 07:55	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 09:23	Damary Valentin	1

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

Sample Description: WS-014(5.5-6.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165471
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 08:35 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

W-014 SDG#: PEK75-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132311848001	08/20/2013 10:24	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-012(1.5-2.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165472
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 08:50 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS012 SDG#: PEK75-03

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

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

Sample Description: WS-012(1.5-2.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165472
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 08:50 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS012 SDG#: PEK75-03

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 purge**		**ug/l**	**ug/l**	**ug/l**	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	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
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.					
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
Metals	**SM 2340 B-1997**		**mg/l**	**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	25.4	0.033	0.20	1
	SW-846 6010B		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1

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

Sample Description: WS-012(1.5-2.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165472
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 08:50 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS012 SDG#: PEK75-03

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**	
07046	Barium	7440-39-3	0.0328	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.82	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.64	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry	**EPA 1664A**		**mg/l**	**mg/l**	**mg/l**	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132312AA	08/20/2013 00:41	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/20/2013 00:41	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 06:10	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 08:06	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 08:06	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 08:06	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 08:06	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 08:06	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 08:06	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 08:06	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 08:06	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 08:06	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 08:06	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 08:06	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 09:25	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132311848001	08/20/2013 10:24	James L Mertz	1

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

Sample Description: WS-012(1.5-2.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165472
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 08:50 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS012 SDG#: PEK75-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-012(5.0-5.5)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165473
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 08:55 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

W-012 SDG#: PEK75-04

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

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

Sample Description: WS-012(5.0-5.5)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165473
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 08:55 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

W-012 SDG#: PEK75-04

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 purge**		**ug/l**	**ug/l**	**ug/l**	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	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
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.					
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1
Metals	**SM 2340 B-1997**		**mg/l**	**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	25.3	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

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

Sample Description: WS-012(5.0-5.5)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165473
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 08:55 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

W-012 SDG#: PEK75-04

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**	
07046	Barium	7440-39-3	0.0335	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.79	0.0334	0.200	1
07051	Chromium	7440-47-3	0.0019 J	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.62	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	I132312AA	08/20/2013 01:02	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/20/2013 01:02	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 06:40	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 08:10	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 08:10	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 08:10	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 08:10	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 08:10	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 08:10	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 08:10	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 08:10	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 08:10	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 08:10	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 08:10	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 09:27	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132311848001	08/20/2013 10:24	James L Mertz	1

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

Sample Description: WS-012(5.0-5.5)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165473
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 08:55 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

W-012 SDG#: PEK75-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-010(1.5-2.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165474
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:15 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS010 SDG#: PEK75-05

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

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

Sample Description: WS-010(1.5-2.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165474
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:15 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS010 SDG#: PEK75-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	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
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.					
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1
Metals	**SM 2340 B-1997**		**mg/l**	**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	24.5	0.033	0.20	1
	SW-846 6010B		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1

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

Sample Description: WS-010(1.5-2.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165474
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:15 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS010 SDG#: PEK75-05

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**	
07046	Barium	7440-39-3	0.0286	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.59	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	2.57	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry	**EPA 1664A**		**mg/l**	**mg/l**	**mg/l**	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132312AA	08/20/2013 01:23	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/20/2013 01:23	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 07:09	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 08:14	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 08:14	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 08:14	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 08:14	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 08:14	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 08:14	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 08:14	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 08:14	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 08:14	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 08:14	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 08:14	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 09:29	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132311848001	08/20/2013 10:24	James L Mertz	1

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

Sample Description: WS-010(1.5-2.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165474
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:15 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS010 SDG#: PEK75-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-010(3.5-4.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165475
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:20 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

W-010 SDG#: PEK75-06

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

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

Sample Description: WS-010(3.5-4.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165475
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:20 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

W-010 SDG#: PEK75-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	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
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.					
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1
Metals	**SM 2340 B-1997**		**mg/l**	**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	24.2	0.033	0.20	1
	SW-846 6010B		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1

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

Sample Description: WS-010(3.5-4.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165475
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:20 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

W-010 SDG#: PEK75-06

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**	
07046	Barium	7440-39-3	0.0288	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.49	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.55	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry	**EPA 1664A**		**mg/l**	**mg/l**	**mg/l**	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132312AA	08/20/2013 01:44	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/20/2013 01:44	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 07:39	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 08:18	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 08:18	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 08:18	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 08:18	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 08:18	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 08:18	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 08:18	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 08:18	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 08:18	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 08:18	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 08:18	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 09:35	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132311848001	08/20/2013 10:24	James L Mertz	1

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

Sample Description: WS-010(3.5-4.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165475
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:20 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

W-010 SDG#: PEK75-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-006(0.5-1.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165476
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:35 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS006 SDG#: PEK75-07BKG

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

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

Sample Description: WS-006(0.5-1.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165476
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:35 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS006 SDG#: PEK75-07BKG

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

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.

GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1

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

Metals	**SM 2340 B-1997**		**mg/l**	**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	24.9	0.033	0.20	1

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

Sample Description: WS-006(0.5-1.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165476
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:35 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS006 SDG#: PEK75-07BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0305	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.62	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	2.63	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	I132312AA	08/20/2013 02:05	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/20/2013 02:05	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 03:43	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 07:28	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 07:28	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 07:28	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 07:28	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 07:28	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 07:28	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 07:28	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 07:28	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 07:28	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 07:28	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 07:28	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 09:37	Damary Valentin	1

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

Sample Description: WS-006(0.5-1.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165476
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:35 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS006 SDG#: PEK75-07BKG

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	132311848001	08/20/2013 10:24	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-006(0.5-1.0)081613MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165477
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:35 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS006 SDG#: PEK75-07MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	41	3.0	5.0	1
02898	Allyl Chloride	107-05-1	4.4	0.1	0.5	1
02898	Benzene	71-43-2	5.4	0.1	0.5	1
02898	Bromobenzene	108-86-1	4.6	0.1	0.5	1
02898	Bromochloromethane	74-97-5	4.6	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	4.8	0.1	0.5	1
02898	Bromoform	75-25-2	4.2	0.1	0.5	1
02898	Bromomethane	74-83-9	3.3	0.1	0.5	1
02898	2-Butanone	78-93-3	39	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	5.8	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	5.6	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	5.0	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	4.9	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.4	0.1	0.5	1
02898	Chloroethane	75-00-3	3.4	0.1	0.5	1
02898	Chloroform	67-66-3	5.2	0.1	0.5	1
02898	Chloromethane	74-87-3	3.0	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.3	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.3	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	3.8	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	4.6	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	5.0	0.1	0.5	1
02898	Dibromomethane	74-95-3	4.8	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.2	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.1	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.1	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	2.1	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.2	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	4.9	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	5.1	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	4.9	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	5.2	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	4.3	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.7	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	5.4	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	4.5	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	5.5	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	4.5	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	4.7	0.1	0.5	1
02898	Ethyl ether	60-29-7	5.0	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.5	0.1	0.5	1
02898	Freon 113	76-13-1	5.2	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	4.4	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	5.3	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	5.3	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	4.1	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	26	1.0	5.0	1
02898	Methylene Chloride	75-09-2	5.1	0.2	0.5	1

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

Sample Description: WS-006(0.5-1.0)081613MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165477
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:35 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS006 SDG#: PEK75-07MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	n-Propylbenzene	103-65-1	5.8	0.1	0.5	1
02898	Styrene	100-42-5	5.2	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	5.0	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	5.7	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	4.6	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	23	2.0	5.0	1
02898	Toluene	108-88-3	5.4	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	4.3	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	4.3	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	4.8	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	5.3	0.1	0.5	1
02898	Trichloroethene	79-01-6	5.3	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	4.2	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	5.5	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	5.5	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	5.5	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	3.3	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	16	0.1	0.5	1
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.					
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
08357	Acenaphthene	83-32-9	1.0	0.010	0.051	1
08357	Acenaphthylene	208-96-8	1.2	0.010	0.051	1
08357	Anthracene	120-12-7	0.45	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.94	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.47	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.85	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.83	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.90	0.010	0.051	1
08357	Chrysene	218-01-9	0.92	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	0.85	0.010	0.051	1
08357	Fluoranthene	206-44-0	1.1	0.010	0.051	1
08357	Fluorene	86-73-7	1.1	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.81	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	1.2	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	1.2	0.010	0.051	1
08357	Naphthalene	91-20-3	1.1	0.030	0.051	1
08357	Phenanthrene	85-01-8	1.0	0.030	0.051	1
08357	Pyrene	129-00-0	1.0	0.010	0.051	1
Metals	**SM 2340 B-1997**		**mg/l**	**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	43.6	0.033	0.20	1
	SW-846 6010B		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.153	0.0068	0.0200	1

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

Sample Description: WS-006(0.5-1.0)081613MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165477
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:35 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS006 SDG#: PEK75-07MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	**mg/l**	
07046	Barium	7440-39-3	2.12	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0508	0.00076	0.0050	1
01750	Calcium	7440-70-2	9.77	0.0334	0.200	1
07051	Chromium	7440-47-3	0.205	0.0016	0.0150	1
07055	Lead	7439-92-1	0.155	0.0047	0.0150	1
01757	Magnesium	7439-95-4	4.65	0.0167	0.100	1
07061	Nickel	7440-02-0	0.523	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.151	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0500	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.514	0.0020	0.0050	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.0010	0.000060	0.00020	1
Wet Chemistry	**EPA 1664A**		**mg/l**	**mg/l**	**mg/l**	
08079	HEM (oil & grease)	n.a.	24.1	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	I132312AA	08/20/2013 02:26	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/20/2013 02:26	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 04:13	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 07:39	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 07:39	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 07:39	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 07:39	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 07:39	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 07:39	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 07:39	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 07:39	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 07:39	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 07:39	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 07:39	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 09:41	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132311848001	08/20/2013 10:24	James L Mertz	1

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

Sample Description: WS-006(0.5-1.0)081613MS Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165477
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:35 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS006 SDG#: PEK75-07MS

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-006(0.5-1.0)081613MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165478
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:35 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS006 SDG#: PEK75-07MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	40	3.0	5.0	1
02898	Allyl Chloride	107-05-1	4.5	0.1	0.5	1
02898	Benzene	71-43-2	5.3	0.1	0.5	1
02898	Bromobenzene	108-86-1	4.5	0.1	0.5	1
02898	Bromochloromethane	74-97-5	4.5	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	4.6	0.1	0.5	1
02898	Bromoform	75-25-2	4.2	0.1	0.5	1
02898	Bromomethane	74-83-9	3.3	0.1	0.5	1
02898	2-Butanone	78-93-3	39	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	5.6	0.1	0.5	1
02898	sec-Butylbenzene	135-98-8	5.5	0.1	0.5	1
02898	tert-Butylbenzene	98-06-6	5.0	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	4.8	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.3	0.1	0.5	1
02898	Chloroethane	75-00-3	3.4	0.1	0.5	1
02898	Chloroform	67-66-3	5.1	0.1	0.5	1
02898	Chloromethane	74-87-3	3.0	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.1	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.2	0.1	0.5	1
02898	1,2-Dibromo-3-chloropropane	96-12-8	3.8	0.2	0.5	1
02898	Dibromochloromethane	124-48-1	4.6	0.1	0.5	1
02898	1,2-Dibromoethane	106-93-4	4.9	0.1	0.5	1
02898	Dibromomethane	74-95-3	4.7	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.0	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	4.9	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.0	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	2.1	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.1	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	4.8	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	5.1	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	4.9	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	5.2	0.1	0.5	1
02898	Dichlorofluoromethane	75-43-4	4.1	0.2	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.5	0.1	0.5	1
02898	1,3-Dichloropropane	142-28-9	5.3	0.1	0.5	1
02898	2,2-Dichloropropane	594-20-7	4.5	0.1	0.5	1
02898	1,1-Dichloropropene	563-58-6	5.4	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	4.5	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	4.7	0.1	0.5	1
02898	Ethyl ether	60-29-7	4.9	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.3	0.1	0.5	1
02898	Freon 113	76-13-1	5.2	0.2	0.5	1
02898	Hexachlorobutadiene	87-68-3	4.2	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	5.2	0.1	0.5	1
02898	p-Isopropyltoluene	99-87-6	5.1	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	4.2	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	25	1.0	5.0	1
02898	Methylene Chloride	75-09-2	5.0	0.2	0.5	1

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

Sample Description: WS-006(0.5-1.0)081613MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165478
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:35 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS006 SDG#: PEK75-07MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	n-Propylbenzene	103-65-1	5.6	0.1	0.5	1
02898	Styrene	100-42-5	5.0	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	4.9	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	5.5	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	4.6	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	24	2.0	5.0	1
02898	Toluene	108-88-3	5.4	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	4.2	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	4.2	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	4.7	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	5.3	0.1	0.5	1
02898	Trichloroethene	79-01-6	5.2	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	4.0	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	5.3	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	5.3	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	5.3	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	3.3	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	15	0.1	0.5	1
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.					
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
08357	Acenaphthene	83-32-9	1.0	0.010	0.051	1
08357	Acenaphthylene	208-96-8	1.1	0.010	0.051	1
08357	Anthracene	120-12-7	0.50	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.89	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.42	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.74	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.69	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.76	0.010	0.051	1
08357	Chrysene	218-01-9	0.83	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	0.74	0.010	0.051	1
08357	Fluoranthene	206-44-0	1.0	0.010	0.051	1
08357	Fluorene	86-73-7	1.1	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.71	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	1.1	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	1.2	0.010	0.051	1
08357	Naphthalene	91-20-3	1.0	0.031	0.051	1
08357	Phenanthrene	85-01-8	0.96	0.031	0.051	1
08357	Pyrene	129-00-0	0.91	0.010	0.051	1
Metals	**SM 2340 B-1997**		**mg/l**	**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	43.4	0.033	0.20	1
	SW-846 6010B		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.157	0.0068	0.0200	1

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

Sample Description: WS-006(0.5-1.0)081613MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165478
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:35 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS006 SDG#: PEK75-07MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	**mg/l**	
07046	Barium	7440-39-3	2.08	0.00033	0.0050	1
07049	Cadmium	7440-43-9	0.0514	0.00076	0.0050	1
01750	Calcium	7440-70-2	9.73	0.0334	0.200	1
07051	Chromium	7440-47-3	0.204	0.0016	0.0150	1
07055	Lead	7439-92-1	0.158	0.0047	0.0150	1
01757	Magnesium	7439-95-4	4.63	0.0167	0.100	1
07061	Nickel	7440-02-0	0.527	0.0015	0.0100	1
07036	Selenium	7782-49-2	0.151	0.0084	0.0200	1
07066	Silver	7440-22-4	0.0489	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.509	0.0020	0.0050	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.0010	0.000060	0.00020	1
Wet Chemistry	**EPA 1664A**		**mg/l**	**mg/l**	**mg/l**	
08079	HEM (oil & grease)	n.a.	34.4	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	I132312AA	08/20/2013 02:47	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/20/2013 02:47	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 04:42	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 07:43	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 07:43	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 07:43	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 07:43	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 07:43	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 07:43	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 07:43	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 07:43	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 07:43	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 07:43	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 07:43	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 09:43	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132311848001	08/20/2013 10:24	James L Mertz	1

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

Sample Description: WS-006(0.5-1.0)081613MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165478
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:35 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS006 SDG#: PEK75-07MSD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-006(0.5-1.0)081613DUP Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165479
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 09:35 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS006 SDG#: PEK75-07DUP

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SM 2340 B-1997**		**mg/l**	**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	25.1	0.033	0.20	1
	SW-846 6010B		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0309	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.69	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.64	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry	**EPA 1664A**		**mg/l**	**mg/l**	**mg/l**	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 07:36	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 07:36	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 07:36	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 07:36	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 07:36	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 07:36	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 07:36	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 07:36	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 07:36	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 07:36	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 07:36	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 09:39	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132311848001	08/20/2013 10:24	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-005(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165480
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 10:15 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS005 SDG#: PEK75-08

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

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

Sample Description: WS-005(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165480
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 10:15 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS005 SDG#: PEK75-08

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 purge**		**ug/l**	**ug/l**	**ug/l**	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	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

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.

GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1

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

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

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

Sample Description: WS-005(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165480
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 10:15 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS005 SDG#: PEK75-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0297	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.31	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.80	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry	**EPA 1664A**		**mg/l**	**mg/l**	**mg/l**	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132312AA	08/20/2013 08:19	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/20/2013 08:19	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 08:08	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 08:21	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 08:21	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 08:21	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 08:21	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 08:21	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 08:21	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 08:21	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 08:21	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 08:21	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 08:21	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 08:21	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 09:45	Damary Valentin	1

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

Sample Description: WS-005(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165480
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 10:15 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS005 SDG#: PEK75-08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132311848001	08/20/2013 10:24	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-002(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165481
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 10:40 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS002 SDG#: PEK75-09

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

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

Sample Description: WS-002(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165481
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 10:40 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS002 SDG#: PEK75-09

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

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.

GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1

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

Metals	**SM 2340 B-1997**		**mg/l**	**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	26.3	0.033	0.20	1

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

Sample Description: WS-002(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165481
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 10:40 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS002 SDG#: PEK75-09

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	0.0459	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.00	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	2.74	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry	**EPA 1664A**		**mg/l**	**mg/l**	**mg/l**	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132312AA	08/20/2013 03:30	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/20/2013 03:30	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 08:37	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 08:25	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 08:25	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 08:25	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 08:25	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 08:25	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 08:25	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 08:25	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 08:25	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 08:25	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 08:25	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 08:25	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 09:48	Damary Valentin	1

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

Sample Description: WS-002(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165481
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 10:40 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS002 SDG#: PEK75-09

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	132311848001	08/20/2013 10:24	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-018(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165482
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 11:00 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS018 SDG#: PEK75-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	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)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165482
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 11:00 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS018 SDG#: PEK75-10

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

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.

GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1

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

Metals	**SM 2340 B-1997**		**mg/l**	**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	26.6	0.033	0.20	1

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

Sample Description: WS-018(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165482
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 11:00 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS018 SDG#: PEK75-10

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.		0.0068	0.0200	1
07046	Barium	7440-39-3	0.0391		0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.		0.00076	0.0050	1
01750	Calcium	7440-70-2	6.00		0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.		0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.		0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.82		0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.		0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.		0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.		0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.		0.0020	0.0050	1
	SW-846 7470A		**mg/l**		**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.		0.000060	0.00020	1
Wet Chemistry	**EPA 1664A**		**mg/l**		**mg/l**	**mg/l**	
08079	HEM (oil & grease)	n.a.	2.7	J	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132312AA	08/20/2013 03:51	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/20/2013 03:51	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 09:07	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 08:29	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 08:29	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 08:29	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 08:29	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 08:29	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 08:29	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 08:29	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 08:29	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 08:29	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 08:29	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 08:29	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 09:50	Damary Valentin	1

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

Sample Description: WS-018(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165482
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 11:00 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS018 SDG#: PEK75-10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132311848001	08/20/2013 10:24	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-011(1.5-2.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165483
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 11:20 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS011 SDG#: PEK75-11

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

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

Sample Description: WS-011(1.5-2.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165483
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 11:20 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS011 SDG#: PEK75-11

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

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.

GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	N.D.	0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1

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

Metals	**SM 2340 B-1997**		**mg/l**	**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	26.8	0.033	0.20	1

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

Sample Description: WS-011(1.5-2.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165483
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 11:20 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS011 SDG#: PEK75-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0403	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.05	0.0334	0.200	1
07051	Chromium	7440-47-3	0.0017 J	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.84	0.0167	0.100	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry	**EPA 1664A**		**mg/l**	**mg/l**	**mg/l**	
08079	HEM (oil & grease)	n.a.	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	I132312AA	08/20/2013 04:12	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/20/2013 04:12	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 09:36	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 08:33	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 08:33	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 08:33	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 08:33	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 08:33	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 08:33	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 08:33	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 08:33	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 08:33	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 08:33	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 08:33	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 09:52	Damary Valentin	1

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

Sample Description: WS-011(1.5-2.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165483
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 11:20 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS011 SDG#: PEK75-11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132311848001	08/20/2013 10:24	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-011(5.0-5.5)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165484
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 11:25 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

W-011 SDG#: PEK75-12

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

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

Sample Description: WS-011(5.0-5.5)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165484
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 11:25 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

W-011 SDG#: PEK75-12

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 purge**		**ug/l**	**ug/l**	**ug/l**	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	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

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.

GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
08357	Acenaphthene	83-32-9	N.D.	0.0088	0.044	1
08357	Acenaphthylene	208-96-8	N.D.	0.0088	0.044	1
08357	Anthracene	120-12-7	N.D.	0.0088	0.044	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.0088	0.044	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0088	0.044	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.0088	0.044	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0088	0.044	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.0088	0.044	1
08357	Chrysene	218-01-9	N.D.	0.0088	0.044	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0088	0.044	1
08357	Fluoranthene	206-44-0	N.D.	0.0088	0.044	1
08357	Fluorene	86-73-7	N.D.	0.0088	0.044	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0088	0.044	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.0088	0.044	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.0088	0.044	1
08357	Naphthalene	91-20-3	N.D.	0.026	0.044	1
08357	Phenanthrene	85-01-8	N.D.	0.026	0.044	1
08357	Pyrene	129-00-0	N.D.	0.0088	0.044	1

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

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

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

Sample Description: WS-011(5.0-5.5)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165484
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 11:25 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

W-011 SDG#: PEK75-12

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	0.0504	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.13	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.91	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0015 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry	**EPA 1664A**		**mg/l**	**mg/l**	**mg/l**	
08079	HEM (oil & grease)	n.a.	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	I132312AA	08/20/2013 04:33	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/20/2013 04:33	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 10:05	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 08:37	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 08:37	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 08:37	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 08:37	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 08:37	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 08:37	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 08:37	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 08:37	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 08:37	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 08:37	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 08:37	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 09:54	Damary Valentin	1

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

Sample Description: WS-011(5.0-5.5)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165484
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 11:25 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

W-011 SDG#: PEK75-12

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	132311848001	08/20/2013 10:24	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-003(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165485
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 12:40 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS003 SDG#: PEK75-13

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

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

Sample Description: WS-003(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165485
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 12:40 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS003 SDG#: PEK75-13

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 purge**		**ug/l**	**ug/l**	**ug/l**	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	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

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.

GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1

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

Metals	**SM 2340 B-1997**		**mg/l**	**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	27.5	0.033	0.20	1

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

Sample Description: WS-003(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165485
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 12:40 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS003 SDG#: PEK75-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0550	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	6.15	0.0334	0.200	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.94	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	I132312AA	08/20/2013 04:54	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/20/2013 04:54	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 10:35	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 08:40	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 08:40	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 08:40	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 08:40	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 08:40	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 08:40	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 08:40	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 08:40	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 08:40	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 08:40	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 08:40	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 10:00	Damary Valentin	1

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

Sample Description: WS-003(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165485
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 12:40 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS003 SDG#: PEK75-13

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132311848001	08/20/2013 10:24	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-007(0.5-1.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165486
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 12:00 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS007 SDG#: PEK75-14

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

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

Sample Description: WS-007(0.5-1.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165486
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 12:00 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS007 SDG#: PEK75-14

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**		**ug/l**	**ug/l**	
02898	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
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.						
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	0.011	J	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.		0.010	0.051	1
08357	Fluoranthene	206-44-0	0.024	J	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.		0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.		0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.		0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.		0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.		0.030	0.051	1
08357	Pyrene	129-00-0	0.019	J	0.010	0.051	1
Metals	**SM 2340 B-1997**		**mg/l**		**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	15.4		0.033	0.20	1
	SW-846 6010B		**mg/l**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.		0.0068	0.0200	1

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

Sample Description: WS-007(0.5-1.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165486
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 12:00 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS007 SDG#: PEK75-14

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**	
07046	Barium	7440-39-3	0.0252	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	3.61	0.0334	0.200	1
07051	Chromium	7440-47-3	0.0017 J	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	1.55	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	I132312AA	08/20/2013 05:15	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/20/2013 05:15	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 11:04	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 08:52	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 08:52	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 08:52	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 08:52	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 08:52	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 08:52	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 08:52	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 08:52	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 08:52	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 08:52	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 08:52	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 10:02	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132311848001	08/20/2013 10:24	James L Mertz	1

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

Sample Description: WS-007(0.5-1.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165486
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 12:00 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS007 SDG#: PEK75-14

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-001(0.5-1.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165487
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 12:15 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS001 SDG#: PEK75-15

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

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

Sample Description: WS-001(0.5-1.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165487
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 12:15 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS001 SDG#: PEK75-15

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 purge**		**ug/l**	**ug/l**	**ug/l**	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	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
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.					
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
Metals	**SM 2340 B-1997**		**mg/l**	**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	25.2	0.033	0.20	1
	SW-846 6010B		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1

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

Sample Description: WS-001(0.5-1.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165487
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 12:15 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS001 SDG#: PEK75-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	**mg/l**	
07046	Barium	7440-39-3	0.0404	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.68	0.0334	0.200	1
07051	Chromium	7440-47-3	0.0020 J	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.68	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	0.0024 J	0.0020	0.0050	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry	**EPA 1664A**		**mg/l**	**mg/l**	**mg/l**	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132312AA	08/20/2013 05:36	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/20/2013 05:36	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 16:46	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 08:56	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 08:56	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 08:56	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 08:56	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 08:56	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 08:56	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 08:56	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 08:56	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 08:56	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 08:56	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 08:56	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 10:04	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132311848001	08/20/2013 10:24	James L Mertz	1

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

Sample Description: WS-001(0.5-1.0)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165487
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 12:15 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WS001 SDG#: PEK75-15

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-BKG-002(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165488
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 12:30 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WSBK2 SDG#: PEK75-16

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

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

Sample Description: WS-BKG-002(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165488
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 12:30 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WSBK2 SDG#: PEK75-16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	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
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.					
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.055	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.055	1
08357	Anthracene	120-12-7	N.D.	0.011	0.055	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.055	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.055	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.055	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.055	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.055	1
08357	Chrysene	218-01-9	N.D.	0.011	0.055	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.055	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.055	1
08357	Fluorene	86-73-7	N.D.	0.011	0.055	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.055	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.055	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.055	1
08357	Naphthalene	91-20-3	N.D.	0.033	0.055	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.055	1
08357	Pyrene	129-00-0	N.D.	0.011	0.055	1
Metals	**SM 2340 B-1997**		**mg/l**	**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	23.8	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

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

Sample Description: WS-BKG-002(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165488
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 12:30 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WSBK2 SDG#: PEK75-16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	**mg/l**	
07046	Barium	7440-39-3	0.0381	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	5.78	0.0334	0.200	1
07051	Chromium	7440-47-3	0.0031 J	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
01757	Magnesium	7439-95-4	2.28	0.0167	0.100	1
07061	Nickel	7440-02-0	0.0028 J	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	0.0037 J	0.0020	0.0050	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
Wet Chemistry	**EPA 1664A**		**mg/l**	**mg/l**	**mg/l**	
08079	HEM (oil & grease)	n.a.	N.D.	1.4	5.0	1

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	I132312AA	08/20/2013 05:57	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/20/2013 05:57	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 17:15	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 08:59	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 08:59	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 08:59	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 08:59	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 08:59	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 08:59	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 08:59	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 08:59	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 08:59	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 08:59	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 08:59	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 10:06	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132311848001	08/20/2013 10:24	James L Mertz	1

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

Sample Description: WS-BKG-002(Surface)081613 Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165488
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 12:30 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WSBK2 SDG#: PEK75-16

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1
08079	HEM (oil & grease)	EPA 1664A	1	13235807901A	08/23/2013 07:27	Yolunder Y Bunch	1

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

Sample Description: WS-EB-31-081613 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165489
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 13:00 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WSE31 SDG#: PEK75-17EB

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

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

Sample Description: WS-EB-31-081613 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165489
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 13:00 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WSE31 SDG#: PEK75-17EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.					
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1
Metals	**SM 2340 B-1997**		**mg/l**	**mg/l**	**mg/l**	
06256	Total Hardness as CaCO3	471-34-1	1.7	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

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

Sample Description: WS-EB-31-081613 Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165489
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013 13:00 by HVA

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WSE31 SDG#: PEK75-17EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals		**SW-846 6010B**	**mg/l**	**mg/l**	**mg/l**	
07046	Barium	7440-39-3	0.0065	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
01750	Calcium	7440-70-2	0.493	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	0.102	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	I132312AA	08/19/2013 23:15	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/19/2013 23:15	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13231WAG026	08/22/2013 17:45	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13231WAG026	08/20/2013 09:30	Anna E Stager	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	132366256001	08/24/2013 10:08	Deborah A Krady	1
07035	Arsenic	SW-846 6010B	1	132311848001	08/24/2013 09:03	Katlin N Cataldi	1
07046	Barium	SW-846 6010B	1	132311848001	08/24/2013 09:03	Katlin N Cataldi	1
07049	Cadmium	SW-846 6010B	1	132311848001	08/24/2013 09:03	Katlin N Cataldi	1
01750	Calcium	SW-846 6010B	1	132311848001	08/24/2013 09:03	Katlin N Cataldi	1
07051	Chromium	SW-846 6010B	1	132311848001	08/24/2013 09:03	Katlin N Cataldi	1
07055	Lead	SW-846 6010B	1	132311848001	08/24/2013 09:03	Katlin N Cataldi	1
01757	Magnesium	SW-846 6010B	1	132311848001	08/24/2013 09:03	Katlin N Cataldi	1
07061	Nickel	SW-846 6010B	1	132311848001	08/24/2013 09:03	Katlin N Cataldi	1
07036	Selenium	SW-846 6010B	1	132311848001	08/24/2013 09:03	Katlin N Cataldi	1
07066	Silver	SW-846 6010B	1	132311848001	08/24/2013 09:03	Katlin N Cataldi	1
07071	Vanadium	SW-846 6010B	1	132311848001	08/24/2013 09:03	Katlin N Cataldi	1
00259	Mercury	SW-846 7470A	1	132315713003	08/21/2013 10:08	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132311848001	08/20/2013 10:24	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132315713003	08/20/2013 11:32	Katlin N Cataldi	1

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

Sample Description: WS-TB-125-081613 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165490
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WT125 SDG#: PEK75-18TB*

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

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

Sample Description: WS-TB-125-081613 Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7165490
LL Group # 1412295
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 08/16/2013

Submitted: 08/17/2013 09:00
Reported: 08/26/2013 09:31

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

WT125 SDG#: PEK75-18TB*

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 purge**		ug/l	ug/l	ug/l	
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	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

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: vinyl chloride and chloroethane.

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	I132312AA	08/19/2013 23:37	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	I132312AA	08/19/2013 23:37	Kevin A Sposito	1

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis Group Number: 1412295
Reported: 08/26/13 at 09:31 AM

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

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: I132312AA	Sample number(s): 7165470-7165478,7165480-7165490								
Acetone	N.D.	3.0	5.0	ug/l	110		60-139		
Allyl Chloride	N.D.	0.1	0.5	ug/l	84		61-130		
Benzene	N.D.	0.1	0.5	ug/l	102		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	90		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	89		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	90		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	82		73-128		
Bromomethane	N.D.	0.1	0.5	ug/l	65		62-126		
2-Butanone	N.D.	1.0	5.0	ug/l	105		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	109		80-120		
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	106		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	96		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	91		80-129		
Chlorobenzene	N.D.	0.1	0.5	ug/l	103		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	66*		68-120		
Chloroform	N.D.	0.1	0.5	ug/l	98		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	59		55-120		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	100		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	102		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	81		64-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	89		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	98		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	93		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	100		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	99		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	41		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	99		80-120		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	94		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	95		80-120		
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	99		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	82		75-145		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	107		80-120		
1,3-Dichloropropane	N.D.	0.1	0.5	ug/l	104		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	102		80-121		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	86		80-123		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	92		80-120		
Ethyl ether	N.D.	0.1	0.5	ug/l	102		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	102		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	96		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	84		73-120		

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis Group Number: 1412295
Reported: 08/26/13 at 09:31 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Isopropylbenzene	N.D.	0.1	0.5	ug/l	98		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	99		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	82		80-120		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	102		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	96		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	109		80-120		
Styrene	N.D.	0.1	0.5	ug/l	99		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	95		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	112		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	87		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	95		65-131		
Toluene	N.D.	0.1	0.5	ug/l	103		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	83		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	82		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	89		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	104		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	100		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	80		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	108		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	104		80-120		
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	103		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	63*		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	99		80-120		
Batch number: 13231WAG026	Sample number(s): 7165470-7165478,7165480-7165489								
Acenaphthene	N.D.	0.010	0.050	ug/l	105		77-118		
Acenaphthylene	N.D.	0.010	0.050	ug/l	106		80-123		
Anthracene	N.D.	0.010	0.050	ug/l	112		78-123		
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	105		73-127		
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	98		72-120		
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	92		79-136		
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	99		64-130		
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	97		73-131		
Chrysene	N.D.	0.010	0.050	ug/l	98		76-125		
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	90		58-131		
Fluoranthene	N.D.	0.010	0.050	ug/l	105		79-124		
Fluorene	N.D.	0.010	0.050	ug/l	95		74-115		
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	91		62-130		
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	112		80-126		
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	114		81-124		
Naphthalene	N.D.	0.030	0.050	ug/l	101		75-120		
Phenanthrene	N.D.	0.030	0.050	ug/l	95		75-120		
Pyrene	N.D.	0.010	0.050	ug/l	103		71-130		
Batch number: 132311848001	Sample number(s): 7165470-7165489								
Arsenic	N.D.	0.0068	0.0200	mg/l	102		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	101		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	104		90-112		
Calcium	N.D.	0.0334	0.200	mg/l	100		90-110		
Chromium	N.D.	0.0016	0.0150	mg/l	99		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	107		88-110		
Magnesium	N.D.	0.0167	0.100	mg/l	99		90-110		
Nickel	N.D.	0.0015	0.0100	mg/l	107		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	103		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	98		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	99		90-110		

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Quality Control Summary

Client Name: ExxonMobil c/o Arcadis Group Number: 1412295
Reported: 08/26/13 at 09:31 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 132315713003	Sample number(s): 7165470-7165489								
Mercury	N.D.	0.00006 0	0.00020	mg/l	104		80-120		
Batch number: 13235807901A	Sample number(s): 7165470-7165488								
HEM (oil & grease)	N.D.	1.4	5.0	mg/l	94	96	78-114	2	16

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: I132312AA	Sample number(s): 7165470-7165478,7165480-7165490 UNSPK: 7165476								
Acetone	110	108	57-163	2	30				
Allyl Chloride	88	90	56-160	2	30				
Benzene	109	106	87-126	2	30				
Bromobenzene	93	90	80-123	2	30				
Bromochloromethane	92	91	82-125	1	30				
Bromodichloromethane	95	92	82-133	3	30				
Bromoform	83	83	60-138	0	30				
Bromomethane	66	65*	66-130	1	30				
2-Butanone	104	103	56-160	1	30				
n-Butylbenzene	116	112	83-131	3	30				
sec-Butylbenzene	113	110	84-128	3	30				
tert-Butylbenzene	101	100	84-135	1	30				
Carbon Tetrachloride	99	97	81-148	2	30				
Chlorobenzene	108	105	78-133	3	30				
Chloroethane	68*	67*	70-139	1	30				
Chloroform	103	101	86-136	2	30				
Chloromethane	60	60	49-135	1	30				
2-Chlorotoluene	105	102	75-134	3	30				
4-Chlorotoluene	106	103	76-134	2	30				
1,2-Dibromo-3-chloropropane	77	77	43-143	0	30				
Dibromochloromethane	93	91	79-125	1	30				
1,2-Dibromoethane	99	99	84-127	1	30				
Dibromomethane	95	93	83-126	2	30				
1,2-Dichlorobenzene	103	101	83-117	2	30				
1,3-Dichlorobenzene	102	99	79-132	3	30				
1,4-Dichlorobenzene	103	100	79-120	2	30				
Dichlorodifluoromethane	42	41	28-136	2	30				
1,1-Dichloroethane	105	103	88-136	2	30				
1,2-Dichloroethane	98	95	82-135	3	30				
1,1-Dichloroethene	102	103	83-150	1	30				
cis-1,2-Dichloroethene	99	98	82-129	1	30				
trans-1,2-Dichloroethene	105	104	88-127	0	30				
Dichlorofluoromethane	85	82	81-161	4	30				
1,2-Dichloropropane	113	110	91-126	3	30				
1,3-Dichloropropane	107	105	80-127	2	30				
2,2-Dichloropropane	91	91	80-134	0	30				
1,1-Dichloropropene	110	108	86-139	2	30				

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis Group Number: 1412295
Reported: 08/26/13 at 09:31 AM

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
cis-1,3-Dichloropropene	90	90	74-132	0	30				
trans-1,3-Dichloropropene	94	94	71-128	0	30				
Ethyl ether	99	97	57-139	2	30				
Ethylbenzene	109	106	80-140	3	30				
Freon 113	105	103	77-147	1	30				
Hexachlorobutadiene	88	83	65-128	5	30				
Isopropylbenzene	105	103	81-133	2	30				
p-Isopropyltoluene	106	103	84-124	3	30				
Methyl Tertiary Butyl Ether	83	84	82-132	2	30				
4-Methyl-2-Pentanone	102	100	69-149	2	30				
Methylene Chloride	102	100	77-135	2	30				
n-Propylbenzene	116	112	79-131	3	30				
Styrene	103	100	63-151	3	30				
1,1,1,2-Tetrachloroethane	100	98	87-126	2	30				
1,1,2,2-Tetrachloroethane	113	109	75-131	4	30				
Tetrachloroethene	92	92	75-129	0	30				
Tetrahydrofuran	93	95	56-154	2	30				
Toluene	109	107	83-127	2	30				
1,2,3-Trichlorobenzene	85	84	73-125	1	30				
1,2,4-Trichlorobenzene	85	84	77-120	2	30				
1,1,1-Trichloroethane	95	94	85-140	1	30				
1,1,2-Trichloroethane	106	106	85-129	0	30				
Trichloroethene	105	103	85-131	2	30				
Trichlorofluoromethane	85	80	73-139	6	30				
1,2,3-Trichloropropane	110	106	76-120	4	30				
1,2,4-Trimethylbenzene	109	106	87-126	3	30				
1,3,5-Trimethylbenzene	109	106	89-129	4	30				
Vinyl Chloride	67	65	62-135	2	30				
Xylene (Total)	104	102	81-137	2	30				
Batch number: 13231WAG026	Sample number(s): 7165470-7165478,7165480-7165489 UNSPK: 7165476								
Acenaphthene	102	100	47-136	2	30				
Acenaphthylene	113	112	33-146	1	30				
Anthracene	44*	49*	69-119	9	30				
Benzo(a)anthracene	93	87	37-150	6	30				
Benzo(a)pyrene	46*	41*	64-123	12	30				
Benzo(b)fluoranthene	84	73	33-152	14	30				
Benzo(g,h,i)perylene	82	67	36-138	19	30				
Benzo(k)fluoranthene	89	74	31-142	17	30				
Chrysene	90	81	34-135	10	30				
Dibenz(a,h)anthracene	84	73	17-134	14	30				
Fluoranthene	105	102	39-147	2	30				
Fluorene	108	104	38-149	3	30				
Indeno(1,2,3-cd)pyrene	79	70	29-143	13	30				
1-Methylnaphthalene	119	111	49-152	7	30				
2-Methylnaphthalene	122	114	51-146	6	30				
Naphthalene	104	102	58-131	2	30				
Phenanthrene	99	94	48-140	5	30				
Pyrene	98	89	59-125	10	30				
Batch number: 132311848001	Sample number(s): 7165470-7165489 UNSPK: 7165476 BKG: 7165476								
Arsenic	102	105	81-123	2	20	N.D.	N.D.	0 (1)	20

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Quality Control Summary

Client Name: ExxonMobil c/o Arcadis Group Number: 1412295
Reported: 08/26/13 at 09:31 AM

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Barium	104	103	78-118	2	20	0.0305	0.0309	1	20
Cadmium	102	103	83-116	1	20	N.D.	N.D.	0 (1)	20
Calcium	104	103	81-118	0	20	5.62	5.69	1	20
Chromium	103	102	81-120	1	20	N.D.	N.D.	0 (1)	20
Lead	104	105	75-125	2	20	N.D.	N.D.	0 (1)	20
Magnesium	101	100	75-125	0	20	2.63	2.64	1	20
Nickel	105	105	86-115	1	20	N.D.	N.D.	0 (1)	20
Selenium	101	101	75-125	0	20	N.D.	N.D.	0 (1)	20
Silver	100	98	75-125	2	20	N.D.	N.D.	0 (1)	20
Vanadium	103	102	90-111	1	20	N.D.	N.D.	0 (1)	20
Batch number: 132315713003	Sample number(s): 7165470-7165489 UNSPK: 7165476 BKG: 7165476								
Mercury	101	104	80-120	3	20	N.D.	N.D.	0 (1)	20
Batch number: 13235807901A	Sample number(s): 7165470-7165488 UNSPK: 7165476 BKG: 7165476								
HEM (oil & grease)	58*	75*	78-114	35*	29	N.D.	N.D.	0 (1)	18

Surrogate Quality Control

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

Analysis Name: BTEX 25-ml purge
Batch number: I132312AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7165470	97	105	103	94
7165471	96	106	102	94
7165472	96	104	103	92
7165473	97	104	103	92
7165474	97	105	103	92
7165475	97	105	103	93
7165476	97	105	103	92
7165477	93	99	106	102
7165478	92	102	105	102
7165480	95	102	104	92
7165481	95	103	102	93
7165482	95	104	102	95
7165483	96	106	102	93
7165484	96	104	103	93
7165485	96	103	103	92
7165486	96	103	103	93
7165487	95	104	103	93
7165488	96	102	103	93
7165489	96	102	103	91
7165490	95	105	103	92
Blank	95	103	103	92
LCS	93	100	106	101
MS	93	99	106	102

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Quality Control Summary

Client Name: ExxonMobil c/o Arcadis Group Number: 1412295
Reported: 08/26/13 at 09:31 AM

Surrogate Quality Control

MSD	92	102	105	102
Limits:	77-114	74-113	77-110	78-110

Analysis Name: PAHs in waters by SIM
Batch number: 13231WAG026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7165470	82	46*	90
7165471	84	54*	98
7165472	91	66	100
7165473	94	75	107
7165474	94	71	109
7165475	92	62	107
7165476	96	59*	107
7165477	96	70	111
7165478	93	62	105
7165480	78	39*	101
7165481	92	61*	106
7165482	97	58*	111
7165483	92	59*	104
7165484	76	48*	83
7165485	92	58*	106
7165486	90	82	104
7165487	93	63	108
7165488	81	75	99
7165489	89	84	115
Blank	88	90	105
LCS	97	94	106
MS	96	70	111
MSD	93	62	105
Limits:	44-137	62-141	51-136

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ExxonMobil Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 14739 — For Eurofins Lancaster Laboratories Environmental use only — Group # 1412295 — Sample # 7165470-90

Instructions on reverse side correspond with circled numbers.

1of2

SCR#: ______

1 Client Information

- Facility #/SID: Mayflower Pipeline Incident
- Site Address: Mayflower AR
- ExxonMobil PM: Scott Bushroe
- Cost Center/AFE:
- Consultant/Office: Arcadis
- Consultant PM: Steve Barrick
- Consultant Phone #: 919-202-6799
- Sampler: H. VanAllen

4 Matrix: Sediment ☐, Ground ☐, Surface ☒, Potable ☐, NPDES ☐, Air ☐, Soil ☐, Oil ☐

5 Analyses Requested / Preservation Code: VOC'S 8260B (H), PAH'S 8270 SIM, RCRA Metals+Ni,V,Ca,Mg (Hardness) (N), Diss Metals, HEM Oil & Grease (H)

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

6 Remarks: Lab to filter & Preserve diss metals upon receipt

Sample Identification (2)	Date Collected	Time Collected	Grab (3)	Composite	Soil	Water	Oil	Total # of Containers	VOC'S 8260B	PAH'S 8270 SIM	RCRA Metals+Ni,V,Ca,Mg	Diss Metals	HEM Oil & Grease
WS-014 (1.5-2.0) 081613	8/16/13	825	X			X		9	X	X	X	X	X
WS-014 (5.5-6.0) 081613	↓	835	X			X		9	X	X	X	X	X
WS-012 (1.5-2.0) 081613		850	X			X		9	X	X	X	X	X
WS-012 (5.0-5.5) 081613		855	X			X		9	X	X	X	X	X
WS-010 (1.5-2.0) 081613		915	X			X		9	X	X	X	X	X
WS-10 (3.5-4.0) 081613		920	X			X		9	X	X	X	X	X
WS-006 (0.5-1.0) 081613		935	X			X		9	X	X	X	X	X
WS-006 (0.5-1.0) 081613 MS/MSD		935	X			X		18	X	X	X	X	X
WS-005 (Surface) 081613		1015	X			X		9	X	X	X	X	X
WS-002 (Surface) 081613		1040	X			X		9	X	X	X	X	X
WS-018 (Surface) 081613		1100	X			X		9	X	X	X	X	X
WS-011 (1.5-2.0) 081613	↓	1120	X			X		9	X	X	X	X	X

7 Turnaround Time Requested (TAT) (please circle): Standard, (5 day) circled, 4 day, 72 hour, 48 hour, 24 hour

8 Data Package (circle if required): Type I - Full, Type VI (Raw Data), NJ Reduced, Other ______

EDD (circle if required): Locus EIM (default), Other ______

9

Relinquished by	Date	Time	Received by	Date	Time
H VanAllen	8/16/13	1600			
Relinquished by Commercial Carrier: UPS X FedEx ___ Other ___			[signature]	8/17/13	900

Temperature Upon Receipt 0.8-2.0 °C — Custody Seals Intact? (Yes) No

ExxonMobil Analysis Request/Chain of Custody

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Acct. # 14739 — For Eurofins Lancaster Laboratories Environmental use only — Group # 1412295 — Sample # 7165470-90

Instructions on reverse side correspond with circled numbers.

SCR#: 2 of 2

(1) Client Information

Facility #/SID: Mayflower Pipeline Incident

Site Address: Mayflower AR

ExxonMobil PM: Scott Bushroe

Cost Center/AFE:

Consultant/Office: Arcadis

Consultant PM: Steve Barrick

Consultant Phone #: 919-202-6799

Sampler: H. VanAllen

(4) Matrix: Sediment ☐ Soil ☐ | Water: Ground ☐ Potable ☐ Surface ☑ NPDES ☐ | Oil ☐ Air ☐

(5) Analyses Requested — Preservation Code

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

(6) Remarks

(2) Sample Identification	Collected Date	Collected Time	(3) Grab	(3) Composite	Total # of Containers	VOC 8260B (H)	PAH's 8270 SIM (H)	RCRA Metals Hardness N, V, Ca, Mg (N)	Diss Metals	HEM Oil & Grease (H)
WS-11 (5.0-5.5) 081613	8/16/13	1125	X		9	X	X	X	X	X
WS-003 (surface) 081613	"	1240	X		9	X	X	X	X	X
WS 007 (0.5-1.0) 081613		1200	X		9	X	X	X	X	X
WS-001 (0.5-1.0) 081613		1215	X		9	X	X	X	X	X
WS-BKG-002 (surface) 081613		1230	X		9	X	X	X	X	X
WS-EB-31-081613		1300	X		7	X	X	X	X	
WS-TB-125-081613	↓	—	X		2	X				

(7) Turnaround Time Requested (TAT) (please circle)

Standard | (5 day) | 4 day

72 hour | 48 hour | 24 hour

(8) Data Package (circle if required)

Type I - Full

Type VI (Raw Data)

NJ Reduced

Other _____

EDD (circle if required)

Locus EIM (default)

Other _____

Relinquished by	Date	Time	Received by	Date	Time
H. VanAllen	8/16/13	1600			

Relinquished by Commercial Carrier: UPS X FedEx ____ Other ____

Received by: [signature] — Date 8/17/13 — Time 900 **(9)**

Temperature Upon Receipt 0.8-2.0 °C

Custody Seals Intact? (Yes) No

Rachel L. Kreamer A# 14739 Gr# 1412295 Samples 7165470-90

From: Mott, Lyndi [Lyndi.Mott@arcadis-us.com]
Sent: Monday, August 19, 2013 8:30 AM
To: Rachel L. Kreamer
Cc: Kathy Klinefelter
Subject: RE: Sample IDs for surface waters received Saturday

Rachel,

Yes, please log these samples in with the leading 0 to be consistent with previous naming.

Thank you,
Lyndi Mott

-----Original Message-----
From: Rachel L. Kreamer [mailto:RKreamer@lancasterlabs.com]
Sent: Monday, August 19, 2013 7:09 AM
To: Mott, Lyndi
Cc: Kathy Klinefelter
Subject: Sample IDs for surface waters received Saturday

Lyndi,

Should the IDs listed on the chain as WS-10(3.5-4.0)081613 and WS-11(5.0-5.5)081613 be WS-010(3.5-4.0)081613 and WS-011(5.0-5.5)081613?

Thanks
Rachel

-----Original Message-----
From: 39Scanner@lancasterlabs.com [mailto:39Scanner@lancasterlabs.com]
Sent: Monday, August 19, 2013 8:02 AM
To: Rachel L. Kreamer
Subject:

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

Scan Date: 08.19.2013 08:01:39 (-0400)
Queries to: 39Scanner@lancasterlabs.com

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G# 1412295

Environmental Sample Administration Receipt Documentation Log

Client/Project: Exxon mobil

Date of Receipt: 8/17/13

Time of Receipt: 900

Source Code: GC-1

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

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

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT121	1.6	TB	WI	Y	B	
2	↓	2.0	↓	↓	↓	↓	
3		1.0					
4		0.8					
5		1.6					
6		1.1					

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: [signature] 2308 **Date/Time:** 8/17/13 1045

Issued by Dept. 6042 Management

2174.06

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C# 1412295

Environmental Sample Administration Receipt Documentation Log

Client/Project: ExxonMobil

Date of Receipt: 8/17/13

Time of Receipt: 900

Source Code: Cou -1

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

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

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT121	0.8	TB	WI	Y	B	
2	↓	0.9	↓	↓	↓	↓	
3	↓	0.6	↓	↓	↓	↓	
4	↓	0.2	↓	↓	↓	↓	
5			↘				
6			↘				

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: 7308 **Date/Time:** 8/17/13 1045

Issued by Dept. 6042 Management

2174.06

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Explanation of Symbols and Abbreviations

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

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

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

> greater than

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

ppb parts per billion

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

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is ≥ 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 ≥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.