

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ExxonMobil
Mobil Pipeline Company
PO Box 4416
Houston TX 77210-4416

June 03, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 05/31/2013
Group Number: 1393718
SDG: PEH92
PO Number: 4510076246
Release Number: MAYFLOWER 1406
State of Sample Origin: AR

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
WS-004(0.5-1.0)053013 Grab Surface Water	7076114
WS-004(0.5-1.0)053013 Filtered Grab Surface Water	7076115
WS-007(0.5-1.0)053013 Grab Surface Water	7076116
WS-007(0.5-1.0)053013 Filtered Grab Surface Water	7076117
WS-TB-58-053013 Water	7076118

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

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

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1393718

General Comments:

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

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

Project specific QC samples are not included in this data set

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

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

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

Analysis Specific Comments:**SW-846 8270C SIM, GC/MS Semivolatiles**

Batch #: 13151WAI026 (Sample number(s): 7076114-7076117)

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7076114, 7076116

Sample #s: 7076115, 7076117

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

Sample #s: 7076114, 7076116

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

SW-846 6010B, Metals

Batch #: 131511848001 (Sample number(s): 7076114-7076117 UNSPK: 7076116 BKG: 7076116)

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

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

SW-846 6010B, Metals Dissolved

Batch #: 131511848001 (Sample number(s): 7076114-7076117 UNSPK: 7076116 BKG: 7076116)

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

Sample Description: WS-004(0.5-1.0)053013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LLI Sample # WW 7076114
LLI Group # 1393718
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 05/30/2013 13:20 by TM

ExxonMobil

Submitted: 05/31/2013 09:20

Mobil Pipeline Company

Reported: 06/03/2013 10:47

PO Box 4416

Houston TX 77210-4416

30-41 SDG#: PEH92-01

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

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

Sample Description: **WS-004(0.5-1.0)053013 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LLI Sample # **WW 7076114**
 LLI Group # **1393718**
 Account # **14739**

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

Collected: 05/30/2013 13:20 by TM ExxonMobil
 Submitted: 05/31/2013 09:20 Mobil Pipeline Company
 Reported: 06/03/2013 10:47 PO Box 4416
 Houston TX 77210-4416

30-41 SDG#: PEH92-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	2.6	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	0.022 J	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	0.014 J	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.053	1
08357	Chrysene	218-01-9	0.019 J	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	0.014 J	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	0.012 J	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	0.016 J	0.011	0.053	1

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	40.6	0.064	0.20	1

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

Sample Description: WS-004(0.5-1.0)053013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LLI Sample # WW 7076114
LLI Group # 1393718
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 05/30/2013 13:20 by TM ExxonMobil
Mobil Pipeline Company
Submitted: 05/31/2013 09:20 PO Box 4416
Reported: 06/03/2013 10:47 Houston TX 77210-4416

30-41 SDG#: PEH92-01

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	0.0206	0.0068	0.0200	1
07046	Barium	7440-39-3	0.331	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00036	0.0050	1
01750	Calcium	7440-70-2	8.16	0.0640	0.200	1
07051	Chromium	7440-47-3	0.0433	0.0011	0.0150	1
07055	Lead	7439-92-1	0.177	0.0051	0.0150	1
01757	Magnesium	7439-95-4	4.91	0.0606	0.100	1
07061	Nickel	7440-02-0	0.0382	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	0.0591	0.0013	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.00011 J	0.000070	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	C131511AA	05/31/2013 13:16	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C131511AA	05/31/2013 13:16	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13151WAI026	06/02/2013 13:21	Linda M Hartenstine	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13151WAI026	05/31/2013 14:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	131511848001	06/02/2013 17:10	Parker D Lindstrom	1
07035	Arsenic	SW-846 6010B	1	131511848001	05/31/2013 14:55	Eric L Eby	1
07046	Barium	SW-846 6010B	1	131511848001	05/31/2013 14:55	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	131511848001	05/31/2013 14:55	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	131511848001	05/31/2013 14:55	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	131511848001	05/31/2013 14:55	Eric L Eby	1
07055	Lead	SW-846 6010B	1	131511848001	05/31/2013 17:50	John P Hook	1
01757	Magnesium	SW-846 6010B	1	131511848001	05/31/2013 14:55	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	131511848001	05/31/2013 14:55	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	131511848001	05/31/2013 14:55	Eric L Eby	1
07066	Silver	SW-846 6010B	1	131511848001	05/31/2013 14:55	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	131511848001	05/31/2013 14:55	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	131515713001	06/01/2013 11:04	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131511848001	05/31/2013 10:10	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131515713001	05/31/2013 15:50	Nelli S Markaryan	1

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

Sample Description: WS-004(0.5-1.0)053013 Filtered Grab Surface Water
Mayflower, AR
Pipeline Incident

LLI Sample # WW 7076115
LLI Group # 1393718
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 05/30/2013 13:20 by TM

ExxonMobil

Submitted: 05/31/2013 09:20

Mobil Pipeline Company

Reported: 06/03/2013 10:47

PO Box 4416

Houston TX 77210-4416

30-42 SDG#: PEH92-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	N.D.	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	N.D.	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	N.D.	0.010	0.051	1

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

Metals Dissolved	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	0.0151	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00036	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0051	0.0150	1
07061	Nickel	7440-02-0	0.0019 J	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0013	0.0050	1
	SW-846 7470A	mg/l	mg/l	mg/l		
00259	Mercury	7439-97-6	N.D.	0.000070	0.00020	1

General Sample Comments

This sample was field filtered for dissolved PAHs and metals.

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
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13151WAI026	06/02/2013 13:48	Linda M Hartenstine	1

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

Sample Description: WS-004(0.5-1.0)053013 Filtered Grab Surface Water
Mayflower, AR
Pipeline Incident

LLI Sample # WW 7076115
LLI Group # 1393718
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 05/30/2013 13:20 by TM

ExxonMobil

Submitted: 05/31/2013 09:20

Mobil Pipeline Company

Reported: 06/03/2013 10:47

PO Box 4416

Houston TX 77210-4416

30-42 SDG#: PEH92-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13151WAI026	05/31/2013 14:00	David S Schrum	1
07035	Arsenic	SW-846 6010B	1	131511848001	05/31/2013 14:59	Eric L Eby	1
07046	Barium	SW-846 6010B	1	131511848001	05/31/2013 14:59	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	131511848001	05/31/2013 14:59	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	131511848001	05/31/2013 14:59	Eric L Eby	1
07055	Lead	SW-846 6010B	1	131511848001	05/31/2013 17:54	John P Hook	1
07061	Nickel	SW-846 6010B	1	131511848001	05/31/2013 14:59	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	131511848001	05/31/2013 14:59	Eric L Eby	1
07066	Silver	SW-846 6010B	1	131511848001	05/31/2013 14:59	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	131511848001	05/31/2013 14:59	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	131515713001	06/01/2013 11:06	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131511848001	05/31/2013 10:10	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131515713001	05/31/2013 15:50	Nelli S Markaryan	1

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

Sample Description: WS-007(0.5-1.0)053013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LLI Sample # WW 7076116
LLI Group # 1393718
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 05/30/2013 13:50 by TM

ExxonMobil

Submitted: 05/31/2013 09:20

Mobil Pipeline Company

Reported: 06/03/2013 10:47

PO Box 4416

Houston TX 77210-4416

30-71 SDG#: PEH92-03

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

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

Sample Description: **WS-007(0.5-1.0)053013 Grab Surface Water**
Mayflower, AR
Pipeline Incident

LLI Sample # **WW 7076116**
 LLI Group # **1393718**
 Account # **14739**

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

Collected: 05/30/2013 13:50 by **TM** ExxonMobil
 Submitted: 05/31/2013 09:20 Mobil Pipeline Company
 Reported: 06/03/2013 10:47 PO Box 4416
 Houston TX 77210-4416

30-71 SDG#: PEH92-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Tetrahydrofuran	109-99-9	N.D.	2.0	5.0	1
02898	Toluene	108-88-3	2.7	0.1	0.5	1
02898	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.1	0.5	1
02898	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	0.027 J	0.010	0.051	1
08357	Anthracene	120-12-7	0.057	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.16	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.11	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.41	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.11	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.14	0.010	0.051	1
08357	Chrysene	218-01-9	0.44	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	0.021 J	0.010	0.051	1
08357	Fluoranthene	206-44-0	0.68	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	0.14	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	0.13	0.030	0.051	1
08357	Pyrene	129-00-0	0.65	0.010	0.051	1

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

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

Metals	SM 2340 B-1997	mg/l	mg/l	mg/l		
06256	Total Hardness as CaCO3	471-34-1	33.0	0.064	0.20	1

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

Sample Description: WS-007(0.5-1.0)053013 Grab Surface Water
Mayflower, AR
Pipeline Incident

LLI Sample # WW 7076116
LLI Group # 1393718
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 05/30/2013 13:50 by TM ExxonMobil
Mobil Pipeline Company
Submitted: 05/31/2013 09:20 PO Box 4416
Reported: 06/03/2013 10:47 Houston TX 77210-4416

30-71 SDG#: PEH92-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0118 J	0.0068	0.0200	1
07046	Barium	7440-39-3	0.225	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00036	0.0050	1
01750	Calcium	7440-70-2	6.26	0.0640	0.200	1
07051	Chromium	7440-47-3	0.0231	0.0011	0.0150	1
07055	Lead	7439-92-1	0.0402	0.0051	0.0150	1
01757	Magnesium	7439-95-4	4.23	0.0606	0.100	1
07061	Nickel	7440-02-0	0.0206	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	0.0381	0.0013	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.000083 J	0.000070	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	C131511AA	05/31/2013 13:39	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C131511AA	05/31/2013 13:39	Kerri E Legerlotz	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13151WAI026	06/02/2013 14:15	Linda M Hartenstine	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13151WAI026	05/31/2013 14:00	David S Schrum	1
06256	Total Hardness as CaCO3	SM 2340 B-1997	1	131511848001	06/02/2013 17:10	Parker D Lindstrom	1
07035	Arsenic	SW-846 6010B	1	131511848001	05/31/2013 14:33	Eric L Eby	1
07046	Barium	SW-846 6010B	1	131511848001	05/31/2013 14:33	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	131511848001	05/31/2013 14:33	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	131511848001	05/31/2013 14:33	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	131511848001	05/31/2013 14:33	Eric L Eby	1
07055	Lead	SW-846 6010B	1	131511848001	05/31/2013 17:28	John P Hook	1
01757	Magnesium	SW-846 6010B	1	131511848001	05/31/2013 14:33	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	131511848001	05/31/2013 14:33	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	131511848001	05/31/2013 14:33	Eric L Eby	1
07066	Silver	SW-846 6010B	1	131511848001	05/31/2013 14:33	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	131511848001	05/31/2013 14:33	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	131515713001	06/01/2013 11:08	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131511848001	05/31/2013 10:10	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131515713001	05/31/2013 15:50	Nelli S Markaryan	1

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

Sample Description: **WS-007(0.5-1.0)053013 Filtered Grab Surface Water**
Mayflower, AR
Pipeline Incident

LLI Sample # **WW 7076117**
 LLI Group # **1393718**
 Account # **14739**

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

Collected: 05/30/2013 13:50 by TM

ExxonMobil

Submitted: 05/31/2013 09:20

Mobil Pipeline Company

Reported: 06/03/2013 10:47

PO Box 4416

Houston TX 77210-4416

30-72 SDG#: PEH92-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
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	0.014 J	0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.	0.032	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	1
08357	Pyrene	129-00-0	N.D.	0.011	0.053	1

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

Metals Dissolved	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	0.0169	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00036	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0051	0.0150	1
07061	Nickel	7440-02-0	0.0019 J	0.0011	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0075	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0012	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0013	0.0050	1
	SW-846 7470A	mg/l	mg/l	mg/l		
00259	Mercury	7439-97-6	N.D.	0.000070	0.00020	1

General Sample Comments

This sample was field filtered for dissolved PAHs and metals.

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
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13151WAI026	06/02/2013 14:42	Linda M Hartenstine	1

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

Sample Description: WS-007(0.5-1.0)053013 Filtered Grab Surface Water
Mayflower, AR
Pipeline Incident

LLI Sample # WW 7076117
LLI Group # 1393718
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 05/30/2013 13:50 by TM

ExxonMobil

Submitted: 05/31/2013 09:20

Mobil Pipeline Company

Reported: 06/03/2013 10:47

PO Box 4416

Houston TX 77210-4416

30-72 SDG#: PEH92-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13151WAI026	05/31/2013 14:00	David S Schrum	1
07035	Arsenic	SW-846 6010B	1	131511848001	05/31/2013 15:10	Eric L Eby	1
07046	Barium	SW-846 6010B	1	131511848001	05/31/2013 15:10	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	131511848001	05/31/2013 15:10	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	131511848001	05/31/2013 15:10	Eric L Eby	1
07055	Lead	SW-846 6010B	1	131511848001	05/31/2013 18:05	John P Hook	1
07061	Nickel	SW-846 6010B	1	131511848001	05/31/2013 15:10	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	131511848001	05/31/2013 15:10	Eric L Eby	1
07066	Silver	SW-846 6010B	1	131511848001	05/31/2013 15:10	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	131511848001	05/31/2013 15:10	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	131515713001	06/01/2013 11:10	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131511848001	05/31/2013 10:10	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	131515713001	05/31/2013 15:50	Nelli S Markaryan	1

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

Sample Description: WS-TB-58-053013 Water
Mayflower, AR
Pipeline Incident

LLI Sample # WW 7076118
LLI Group # 1393718
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 05/30/2013

ExxonMobil

Submitted: 05/31/2013 09:20

Mobil Pipeline Company

Reported: 06/03/2013 10:47

PO Box 4416

Houston TX 77210-4416

30T58 SDG#: PEH92-05TB*

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

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

Sample Description: WS-TB-58-053013 Water
Mayflower, AR
Pipeline Incident

LLI Sample # WW 7076118
LLI Group # 1393718
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 05/30/2013

ExxonMobil

Submitted: 05/31/2013 09:20

Mobil Pipeline Company

Reported: 06/03/2013 10:47

PO Box 4416

Houston TX 77210-4416

30T58 SDG#: PEH92-05TB*

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

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	Silvertip & Mayflower VOCs8260	SW-846 8260B 25mL purge	1	C131511AA	05/31/2013 12:54	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C131511AA	05/31/2013 12:54	Kerri E Legerlotz	1

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

Quality Control Summary

Client Name: ExxonMobil
Reported: 06/03/13 at 10:47 AM

Group Number: 1393718

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

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: C131511AA	Sample number(s): 7076114,7076116,7076118								
Acetone	N.D.	3.0	5.0	ug/l	102		73-135		
Allyl Chloride	N.D.	0.1	0.5	ug/l	92		61-130		
Benzene	N.D.	0.1	0.5	ug/l	106		80-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	103		80-120		
Bromochloromethane	N.D.	0.1	0.5	ug/l	111		80-125		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	104		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	111		63-132		
Bromomethane	N.D.	0.1	0.5	ug/l	101		38-146		
2-Butanone	N.D.	1.0	5.0	ug/l	100		70-130		
n-Butylbenzene	N.D.	0.1	0.5	ug/l	99		80-120		
sec-Butylbenzene	N.D.	0.1	0.5	ug/l	102		80-120		
tert-Butylbenzene	N.D.	0.1	0.5	ug/l	104		80-120		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	113		74-133		
Chlorobenzene	N.D.	0.1	0.5	ug/l	111		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	99		67-124		
Chloroform	N.D.	0.1	0.5	ug/l	107		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	89		55-135		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	105		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	107		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.2	0.5	ug/l	107		57-141		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	110		80-126		
1,2-Dibromoethane	N.D.	0.1	0.5	ug/l	105		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	107		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	107		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	105		80-112		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	83		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	106		80-120		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	105		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	114		80-123		
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	107		80-120		
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	109		80-120		
Dichlorofluoromethane	N.D.	0.2	0.5	ug/l	121		63-149		
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	103		80-120		
2,2-Dichloropropane	N.D.	0.1	0.5	ug/l	107		75-122		
1,1-Dichloropropene	N.D.	0.1	0.5	ug/l	107		80-121		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	98		74-120		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	94		73-126		
Ethyl ether	N.D.	0.1	0.5	ug/l	92		59-130		
Ethylbenzene	N.D.	0.1	0.5	ug/l	106		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	114		78-132		
Hexachlorobutadiene	N.D.	0.1	0.5	ug/l	100		61-125		

*- Outside of specification

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

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

Quality Control Summary

Client Name: ExxonMobil

Group Number: 1393718

Reported: 06/03/13 at 10:47 AM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCS D %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Isopropylbenzene	N.D.	0.1	0.5	ug/l	106		80-120		
p-Isopropyltoluene	N.D.	0.1	0.5	ug/l	104		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	95		80-125		
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	93		69-135		
Methylene Chloride	N.D.	0.2	0.5	ug/l	110		80-120		
n-Propylbenzene	N.D.	0.1	0.5	ug/l	101		80-120		
Styrene	N.D.	0.1	0.5	ug/l	110		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	110		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	100		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	111		80-120		
Tetrahydrofuran	N.D.	2.0	5.0	ug/l	105		65-131		
Toluene	N.D.	0.1	0.5	ug/l	107		80-120		
1,2,3-Trichlorobenzene	N.D.	0.1	0.5	ug/l	94		63-120		
1,2,4-Trichlorobenzene	N.D.	0.1	0.5	ug/l	92		70-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	109		79-127		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	107		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	109		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	102		77-132		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	101		80-120		
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	102		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	95		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	108		80-120		

Batch number: 13151WAI026

Sample number(s): 7076114-7076117

Acenaphthene	N.D.	0.010	0.050	ug/l	99	100	65-124	1	30
Acenaphthylene	N.D.	0.010	0.050	ug/l	105	106	72-113	1	30
Anthracene	N.D.	0.010	0.050	ug/l	104	104	70-117	0	30
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	107	105	75-115	1	30
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	95	95	72-120	0	30
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	103	106	74-130	2	30
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	106	106	63-121	1	30
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	108	106	74-118	2	30
Chrysene	N.D.	0.010	0.050	ug/l	103	105	75-112	2	30
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	102	102	66-122	0	30
Fluoranthene	N.D.	0.010	0.050	ug/l	101	101	73-116	0	30
Fluorene	N.D.	0.010	0.050	ug/l	102	102	74-115	0	30
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	105	106	66-122	1	30
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	109	108	72-114	1	30
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	111	109	74-119	2	30
Naphthalene	N.D.	0.030	0.050	ug/l	100	99	67-118	1	30
Phenanthrene	N.D.	0.030	0.050	ug/l	96	97	72-109	0	30
Pyrene	N.D.	0.010	0.050	ug/l	104	104	71-116	0	30

Batch number: 131511848001

Sample number(s): 7076114-7076117

Arsenic	N.D.	0.0068	0.0200	mg/l	97		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	101		90-110		
Cadmium	N.D.	0.00036	0.0050	mg/l	100		90-112		
Calcium	0.151 J	0.0640	0.200	mg/l	103		90-110		
Chromium	N.D.	0.0011	0.0150	mg/l	102		90-110		
Lead	N.D.	0.0051	0.0150	mg/l	104		88-110		
Magnesium	N.D.	0.0606	0.100	mg/l	98		90-110		
Nickel	N.D.	0.0011	0.0100	mg/l	103		90-111		
Selenium	N.D.	0.0075	0.0200	mg/l	101		80-120		
Silver	N.D.	0.0012	0.0050	mg/l	97		80-120		
Vanadium	N.D.	0.0013	0.0050	mg/l	104		90-110		

*- Outside of specification

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

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

Quality Control Summary

Client Name: ExxonMobil

Group Number: 1393718

Reported: 06/03/13 at 10:47 AM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 131515713001	Sample number(s): 7076114-7076117								
Mercury	N.D.	0.00007	0.00020	mg/l	92		80-120		
		0							

Sample Matrix Quality Control

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

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: C131511AA	Sample number(s): 7076114,7076116,7076118 UNSPK: P069880								
Acetone	100	100	57-163	1	30				
Allyl Chloride	88	93	67-139	6	30				
Benzene	97	104	87-126	7	30				
Bromobenzene	93	107	80-123	14	30				
Bromochloromethane	103	106	82-125	3	30				
Bromodichloromethane	95	106	82-133	11	30				
Bromoform	105	117	60-138	11	30				
Bromomethane	101	103	41-145	2	30				
2-Butanone	96	100	63-146	4	30				
n-Butylbenzene	95	106	83-131	11	30				
sec-Butylbenzene	96	107	84-128	12	30				
tert-Butylbenzene	97	111	84-135	13	30				
Carbon Tetrachloride	108	112	81-148	4	30				
Chlorobenzene	102	113	78-133	10	30				
Chloroethane	100	101	70-139	2	30				
Chloroform	98	105	86-136	6	30				
Chloromethane	91	93	55-152	2	30				
2-Chlorotoluene	94	108	81-120	14	30				
4-Chlorotoluene	97	110	82-119	13	30				
1,2-Dibromo-3-chloropropane	106	114	43-143	8	30				
Dibromochloromethane	102	114	79-125	12	30				
1,2-Dibromoethane	95	106	84-127	11	30				
Dibromomethane	97	105	83-126	7	30				
1,2-Dichlorobenzene	96	109	83-117	12	30				
1,3-Dichlorobenzene	97	109	81-118	12	30				
1,4-Dichlorobenzene	97	110	79-120	12	30				
Dichlorodifluoromethane	86	87	28-136	1	30				
1,1-Dichloroethane	97	103	88-136	6	30				
1,2-Dichloroethane	96	103	82-135	7	30				
1,1-Dichloroethene	108	115	83-150	6	30				
cis-1,2-Dichloroethene	98	105	82-129	7	30				
trans-1,2-Dichloroethene	102	107	88-127	5	30				
Dichlorofluoromethane	125	125	59-176	1	30				
1,2-Dichloropropane	97	107	91-126	9	30				
1,3-Dichloropropane	94	105	80-127	11	30				
2,2-Dichloropropane	99	106	80-134	7	30				
1,1-Dichloropropene	99	106	86-139	7	30				
cis-1,3-Dichloropropene	87	100	74-132	14	30				
trans-1,3-Dichloropropene	85	95	71-128	11	30				
Ethyl ether	86	86	67-127	0	30				

*- Outside of specification

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

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

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

Quality Control Summary

Client Name: ExxonMobil
Reported: 06/03/13 at 10:47 AM

Group Number: 1393718

Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Ethylbenzene	99	109	80-140	9	30				
Freon 113	110	114	87-158	3	30				
Hexachlorobutadiene	95	107	65-128	12	30				
Isopropylbenzene	99	110	81-133	11	30				
p-Isopropyltoluene	96	108	84-124	12	30				
Methyl Tertiary Butyl Ether	87	94	82-132	7	30				
4-Methyl-2-Pentanone	89	104	69-149	15	30				
Methylene Chloride	100	105	84-122	5	30				
n-Propylbenzene	94	106	79-131	12	30				
Styrene	100	113	63-151	12	30				
1,1,1,2-Tetrachloroethane	102	113	87-126	10	30				
1,1,2,2-Tetrachloroethane	93	107	75-131	14	30				
Tetrachloroethene	105	113	75-129	7	30				
Tetrahydrofuran	98	99	56-154	2	30				
Toluene	100	106	83-127	7	30				
1,2,3-Trichlorobenzene	86	99	73-125	14	30				
1,2,4-Trichlorobenzene	83	97	77-120	15	30				
1,1,1-Trichloroethane	102	109	85-140	7	30				
1,1,2-Trichloroethane	98	109	85-129	10	30				
Trichloroethene	101	108	85-131	7	30				
Trichlorofluoromethane	106	106	67-161	1	30				
1,2,3-Trichloropropane	93	105	76-120	12	30				
1,2,4-Trimethylbenzene	94	107	87-126	13	30				
1,3,5-Trimethylbenzene	95	107	89-129	12	30				
Vinyl Chloride	99	101	65-151	2	30				
Xylene (Total)	100	111	81-137	10	30				

Batch number: 131511848001	Sample number(s): 7076114-7076117	UNSPK: 7076116	BKG: 7076116						
Arsenic	98	98	81-123	0	20	0.0118 J	0.0124 J	5 (1)	20
Barium	102	103	78-118	1	20	0.225	0.228	1	20
Cadmium	97	98	83-116	1	20	N.D.	N.D.	0 (1)	20
Calcium	101	101	81-118	0	20	6.26	6.39	2	20
Chromium	110	110	81-120	1	20	0.0231	0.0234	1 (1)	20
Lead	104	106	75-125	2	20	0.0402	0.0443	10 (1)	20
Magnesium	175*	171*	75-125	1	20	4.23	4.32	2	20
Nickel	103	103	86-115	0	20	0.0206	0.0206	0 (1)	20
Selenium	98	98	75-125	0	20	N.D.	0.0080 J	200* (1)	20
Silver	98	97	75-125	1	20	N.D.	N.D.	0 (1)	20
Vanadium	109	108	90-111	1	20	0.0381	0.0386	1	20

Batch number: 131515713001	Sample number(s): 7076114-7076117	UNSPK: P076107	BKG: P076107						
Mercury	93	93	80-120	0	20	N.D.	N.D.	0 (1)	20

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: NHDES VOCs 25ml purge

*- Outside of specification

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

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

Quality Control Summary

Client Name: ExxonMobil
Reported: 06/03/13 at 10:47 AM

Group Number: 1393718

Surrogate Quality Control

Batch number: C131511AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7076114	105	101	99	95
7076116	105	101	99	95
7076118	105	103	100	96
Blank	106	104	101	95
LCS	103	103	103	100
MS	104	104	103	101
MSD	103	101	102	99

Limits: 77-114 74-113 77-110 78-110

Analysis Name: PAHs in waters by SIM

Batch number: 13151WAI026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7076114	17*	16*	23*
7076115	89	92	98
7076116	24*	16*	33*
7076117	93	106	100
Blank	97	111	101
LCS	98	107	104
LCSD	97	107	103

Limits: 64-120 62-141 58-134

*- Outside of specification

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

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

ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 14739 Group # 1393718 Sample # 7076114-18
 For Lancaster Laboratories use only
Instructions on reverse side correspond with circled numbers.

1 of 1

1 Client Information				4 Matrix			5 Analyses Requested							SCR#: _____		
Facility #/SID <u>Mayflower Pipeline Incident</u>				Potable <input type="checkbox"/> Ground <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input checked="" type="checkbox"/>	Sediment <input type="checkbox"/> Soil <input type="checkbox"/>	Water <input type="checkbox"/>	Oil <input type="checkbox"/> Air <input type="checkbox"/>	Preservation Code							Total # of Containers <u>9</u> <u>9</u> <u>2</u>	H <input type="checkbox"/> Cl <input type="checkbox"/> N <input type="checkbox"/> HNO ₃ <input type="checkbox"/> S <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> T = Thiosulfate B = NaOH O = Other
Site Address <u>Mayflower, AR</u>								VOC <u>8260 B</u> PAHs <u>8270 SIM</u> BCR Metals <u>Ni, V, Cr, Mg</u> Filtered PAHs <u>8270SIM</u> Filtered BCR Metals <u>Ni, V</u>								
ExxonMobil PM <u>Scott Bushroe</u>		Cost Center/AFE						Remarks Data Analysis Questions: Lyndi Motz ARCADIS								
Consultant/Office <u>ARCADIS-US</u>																
Consultant PM <u>Steve Barnick</u>		Consultant Phone # <u>919 302 6799</u>														
Sampler <u>T. Milburn / H. Van Aller</u>		720 635 0173														
2 Sample Identification				3										6		
		Collected		Grab <input type="checkbox"/>	Composite <input type="checkbox"/>											
		Date	Time													
WS-004(0.5-1.0)053013		<u>5/30/13</u>	<u>1320</u>													
WS-007(0.5-1.0)053013		<u>5/30/13</u>	<u>1350</u>													
WS-TB-58-053013		<u>5/30/13</u>														

7 Turnaround Time Requested (TAT) (please circle) Standard 5 day 4 day 72 hour 48 hour <u>24 hour</u>	Relinquished by <u>H. Van Aller</u>	Date <u>5/30/13</u>	Time <u>1700</u>	Received by	Date	Time
	Relinquished by	Date	Time	Received by	Date	Time
	Relinquished by	Date	Time	Received by	Date	Time
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 Commercial Carrier UPS _____ FedEx <input checked="" type="checkbox"/> Other _____		Received by <u>Deloranda Nrsli</u>	Date <u>5/31/13</u>	Time <u>0920</u>
	Temperature Upon Receipt <u>1.7</u> °C			Custody Seals Intact? <u>Yes</u> No		

Kathy Klinefelter

A# 14739, Gr# 1393718, Samples 7076114-18

From: Mott, Lyndi [Lyndi.Mott@arcadis-us.com]
Sent: Friday, May 31, 2013 8:28 AM
To: Kathy Klinefelter
Cc: Van Aller, Hans
Subject: RE: Mayflower COCs Surface water sampling 053013

Kathy,

This is a special request for these 2 surface water locations. Yes, they are 24 hour TAT and the samples were filtered in the field.

Lyndi Mott

From: Kathy Klinefelter [mailto:KKlinefelter@lancasterlabs.com]
Sent: Thursday, May 30, 2013 10:38 PM
To: Van Aller, Hans; Mott, Lyndi; Barrick, Stephen; Brewer, Stacey; Kull, Valerie; SA Env Entry; Capria, Dennis; Suer, Jake; Rachel L. Kreamer; McKenzie, Mary; Chandler, Jennifer
Cc: Molina, Joe; Lipka, Shelby; Parmelee, Rhiannon; Pritchard, Jamie
Subject: RE: Mayflower COCs Surface water sampling 053013

Please confirm that the 24 hour TAT request is correct for the attached COC. Are the samples for Filtered PAHs and Filtered Metals field filtered? Thanks.

From: Van Aller, Hans [mailto:Hans.VanAller@arcadis-us.com]
Sent: Thursday, May 30, 2013 6:29 PM
To: Kathy Klinefelter; Mott, Lyndi; Barrick, Stephen; Brewer, Stacey; Kull, Valerie; SA Env Entry; Capria, Dennis; Suer, Jake; Rachel L. Kreamer; McKenzie, Mary; Chandler, Jennifer
Cc: Molina, Joe; Lipka, Shelby; Parmelee, Rhiannon; Pritchard, Jamie
Subject: Mayflower COCs Surface water sampling 053013

Hello All

Attached are the CoCs for today's surface water sampling.

Thanks,

Hans H. van Aller IV | Field Tech 3 | Hans.VanAller@arcadis-us.com
 ARCADIS U.S., Inc. | 630 Plaza Drive, Suite 100 | Highlands Ranch, CO 80129
 T. 720.344.3500 | M.720.635.0173 | F. 720.344.3535

www.arcadis-us.com

ARCADIS, Imagine the result

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5/31/2013

**Environmental Sample Administration
Receipt Documentation Log**

1393718

Client/Project: XOM Mayflower

Shipping Container Sealed: YES NO

Date of Receipt: 5/31/13

Custody Seal Present * : YES NO

Time of Receipt: 0920

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

Source Code: 50-1

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT121	1.7	TB	WI	Y	B	
2							
3							
4							
5							
6							

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: W. Meslund / 208 Date/Time: 5/31/13 / 0945

Explanation of Symbols and Abbreviations

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

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
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 of gas 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.		

U.S. EPA CLP Data Qualifiers:

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

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

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

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

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

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