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 23, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 06/15/2013
Group Number: 1397455
SDG: PEI23
PO Number: 4510076246
Release Number: MAYFLOWER 1406
State of Sample Origin: AR

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| WS-003(Surface)061413 Grab Surface Water | 7094713 |
| WS-002(Surface)061413 Grab Surface Water | 7094714 |
| WS-005(Surface)061413 Grab Surface Water | 7094715 |
| WS-001(Surface)061413 Grab Surface Water | 7094716 |
| WS-001(0.5-1.0)061413 Grab Surface Water | 7094717 |
| WS-004(Surface)061413 Grab Surface Water | 7094718 |
| WS-004(0.5-1.0)061413 Grab Surface Water | 7094719 |
| WS-007(Surface)061413 Grab Surface Water | 7094720 |
| WS-007(Surface)061413 MS Grab Surface Water | 7094721 |
| WS-007(Surface)061413 MSD Grab Surface Water | 7094722 |
| WS-007(Surface)061413 DUP Grab Surface Water | 7094723 |
| WS-007(0.5-1.0)061413 Grab Surface Water | 7094724 |
| WS-006(Surface)040813 Grab Surface Water | 7094725 |
| WS-006(0.5-1.0)040813 Grab Surface Water | 7094726 |
| WS-TB-73-061413 Water | 7094727 |

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

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1397455

**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 8270C SIM, GC/MS Semivolatiles

Batch #: 13168WAD026 (Sample number(s): 7094713-7094722, 7094724-7094726 UNSPK: 7094720)

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

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7094713, 7094714, 7094715, 7094717, 7094724, 7094726

Sample #s: 7094713, 7094714, 7094715, 7094717, 7094724, 7094726

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

**Sample Description:** WS-003(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094713**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 07:30 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

3-SFC SDG#: PEI23-01

| 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-003(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094713**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 07:30 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

3-SFC SDG#: PEI23-01

| 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 |
| **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 | 21.2 | 0.064 | 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 | 0.0220 | 0.00033 | 0.0050 | 1 |

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

eurofins | Lancaster Laboratories

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

# Analysis Report

**Sample Description:** WS-003(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094713**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 07:30 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

3-SFC SDG#: PEI23-01

| 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** | |
| 07049 | Cadmium | 7440-43-9 | N.D. | 0.00036 | 0.0050 | 1 |
| 01750 | Calcium | 7440-70-2 | 4.77 | 0.0640 | 0.200 | 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 |
| 01757 | Magnesium | 7439-95-4 | 2.25 | 0.0606 | 0.100 | 1 |
| 07061 | Nickel | 7440-02-0 | N.D. | 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

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 | C131682AA | 06/18/2013 00:17 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | C131682AA | 06/18/2013 00:17 | Kevin A Sposito | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13168WAD026 | 06/21/2013 14:10 | Joseph M Gambler | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13168WAD026 | 06/17/2013 19:30 | Nicholas W Shroyer | 1 |
| 06256 | Total Hardness as CaCO3 | SM 2340 B-1997 | 1 | 131716256001 | 06/20/2013 15:08 | Parker D Lindstrom | 1 |
| 07035 | Arsenic | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:07 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:07 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:07 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:07 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:07 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:07 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:07 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:07 | John P Hook | 1 |
| 07036 | Selenium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:07 | John P Hook | 1 |
| 07066 | Silver | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:07 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:07 | John P Hook | 1 |
| 00259 | Mercury | SW-846 7470A | 1 | 131675713002 | 06/18/2013 07:51 | Damary Valentin | 1 |
| 01848 | WW SW846 ICP Digest (tot rec) | SW-846 3005A | 1 | 131661848003 | 06/17/2013 10:17 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131675713002 | 06/17/2013 15:15 | Nelli S Markaryan | 1 |

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

**Sample Description:** WS-002(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094714**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 07:50 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

2-SFC SDG#: PEI23-02

| 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-002(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094714**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 07:50 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

2-SFC SDG#: PEI23-02

| 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 |
| **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 | 21.2 | 0.064 | 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 | 0.0220 | 0.00033 | 0.0050 | 1 |

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

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

# Analysis Report

**Sample Description:** WS-002(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094714**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 07:50 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

2-SFC SDG#: PEI23-02

| 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** | |
| 07049 | Cadmium | 7440-43-9 | N.D. | 0.00036 | 0.0050 | 1 |
| 01750 | Calcium | 7440-70-2 | 4.94 | 0.0640 | 0.200 | 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 |
| 01757 | Magnesium | 7439-95-4 | 2.15 | 0.0606 | 0.100 | 1 |
| 07061 | Nickel | 7440-02-0 | N.D. | 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

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 | C131682AA | 06/18/2013 00:39 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | C131682AA | 06/18/2013 00:39 | Kevin A Sposito | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13168WAD026 | 06/21/2013 14:40 | Joseph M Gambler | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13168WAD026 | 06/17/2013 19:30 | Nicholas W Shroyer | 1 |
| 06256 | Total Hardness as CaCO3 | SM 2340 B-1997 | 1 | 131716256001 | 06/20/2013 15:08 | Parker D Lindstrom | 1 |
| 07035 | Arsenic | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:11 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:11 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:11 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:11 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:11 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:11 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:11 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:11 | John P Hook | 1 |
| 07036 | Selenium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:11 | John P Hook | 1 |
| 07066 | Silver | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:11 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:11 | John P Hook | 1 |
| 00259 | Mercury | SW-846 7470A | 1 | 131675713002 | 06/18/2013 07:53 | Damary Valentin | 1 |
| 01848 | WW SW846 ICP Digest (tot rec) | SW-846 3005A | 1 | 131661848003 | 06/17/2013 10:17 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131675713002 | 06/17/2013 15:15 | Nelli S Markaryan | 1 |

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

**Sample Description:** WS-005(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094715**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 08:20 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

5-SFC SDG#: PEI23-03

| 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-005(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094715**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 08:20 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

5-SFC SDG#: PEI23-03

| 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 |
| **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 | 21.2 | 0.064 | 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 | 0.0180 | 0.00033 | 0.0050 | 1 |

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

**Sample Description:** WS-005(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample #** WW 7094715
**LLI Group #** 1397455
**Account #** 14739

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

Collected: 06/14/2013 08:20 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

5-SFC SDG#: PEI23-03

| 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** | |
| 07049 | Cadmium | 7440-43-9 | 0.00039 J | 0.00036 | 0.0050 | 1 |
| 01750 | Calcium | 7440-70-2 | 4.95 | 0.0640 | 0.200 | 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 |
| 01757 | Magnesium | 7439-95-4 | 2.15 | 0.0606 | 0.100 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0015 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

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 | C131682AA | 06/18/2013 01:02 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | C131682AA | 06/18/2013 01:02 | Kevin A Sposito | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13168WAD026 | 06/21/2013 15:10 | Joseph M Gambler | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13168WAD026 | 06/17/2013 19:30 | Nicholas W Shroyer | 1 |
| 06256 | Total Hardness as CaCO3 | SM 2340 B-1997 | 1 | 131716256001 | 06/20/2013 15:08 | Parker D Lindstrom | 1 |
| 07035 | Arsenic | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:23 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:23 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:23 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:23 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:23 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:23 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:23 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:23 | John P Hook | 1 |
| 07036 | Selenium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:23 | John P Hook | 1 |
| 07066 | Silver | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:23 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:23 | John P Hook | 1 |
| 00259 | Mercury | SW-846 7470A | 1 | 131675713002 | 06/18/2013 07:55 | Damary Valentin | 1 |
| 01848 | WW SW846 ICP Digest (tot rec) | SW-846 3005A | 1 | 131661848003 | 06/17/2013 10:17 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131675713002 | 06/17/2013 15:15 | Nelli S Markaryan | 1 |

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

**Sample Description:** WS-001(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094716**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 08:50 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

1-SFC SDG#: PEI23-04

| 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-001(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094716**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 08:50 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

1-SFC SDG#: PEI23-04

| 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 |
| **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 |
| **Metals** | **SM 2340 B-1997** | | **mg/l** | **mg/l** | **mg/l** | |
| 06256 | Total Hardness as CaCO3 | 471-34-1 | 22.1 | 0.064 | 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 | 0.0346 | 0.00033 | 0.0050 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.00041 J | 0.00036 | 0.0050 | 1 |
| 01750 | Calcium | 7440-70-2 | 5.10 | 0.0640 | 0.200 | 1 |

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

**Sample Description:** WS-001(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094716**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 08:50 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

1-SFC SDG#: PEI23-04

| 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** | |
| 07051 | Chromium | 7440-47-3 | 0.0021 J | 0.0011 | 0.0150 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0058 J | 0.0051 | 0.0150 | 1 |
| 01757 | Magnesium | 7439-95-4 | 2.27 | 0.0606 | 0.100 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0028 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 | 0.0027 J | 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

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 | C131682AA | 06/18/2013 01:24 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | C131682AA | 06/18/2013 01:24 | Kevin A Sposito | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13168WAD026 | 06/21/2013 15:40 | Joseph M Gambler | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13168WAD026 | 06/17/2013 19:30 | Nicholas W Shroyer | 1 |
| 06256 | Total Hardness as CaCO3 | SM 2340 B-1997 | 1 | 131716256001 | 06/20/2013 15:08 | Parker D Lindstrom | 1 |
| 07035 | Arsenic | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:27 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:27 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:27 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:27 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:27 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:27 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:27 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:27 | John P Hook | 1 |
| 07036 | Selenium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:27 | John P Hook | 1 |
| 07066 | Silver | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:27 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:27 | John P Hook | 1 |
| 00259 | Mercury | SW-846 7470A | 1 | 131675713002 | 06/18/2013 07:57 | Damary Valentin | 1 |
| 01848 | WW SW846 ICP Digest (tot rec) | SW-846 3005A | 1 | 131661848003 | 06/17/2013 10:17 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131675713002 | 06/17/2013 15:15 | Nelli S Markaryan | 1 |

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

**Sample Description:** WS-001(0.5-1.0)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample #** WW 7094717
**LLI Group #** 1397455
**Account #** 14739

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

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

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

510-1 SDG#: PEI23-05

| 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-001(0.5-1.0)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094717**
**LLI Group # 1397455**
**Account # 14739**

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

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

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

510-1 SDG#: PEI23-05

| 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 |
| **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 | 19.8 | 0.064 | 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 | 0.0190 | 0.00033 | 0.0050 | 1 |

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

**Sample Description:** WS-001(0.5-1.0)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample #** WW 7094717
**LLI Group #** 1397455
**Account #** 14739

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

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

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

510-1 SDG#: PEI23-05

| 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** | |
| 07049 | Cadmium | 7440-43-9 | 0.00037 J | 0.00036 | 0.0050 | 1 |
| 01750 | Calcium | 7440-70-2 | 4.50 | 0.0640 | 0.200 | 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 |
| 01757 | Magnesium | 7439-95-4 | 2.09 | 0.0606 | 0.100 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0013 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

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 | C131682AA | 06/18/2013 01:46 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | C131682AA | 06/18/2013 01:46 | Kevin A Sposito | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13168WAD026 | 06/21/2013 16:09 | Joseph M Gambler | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13168WAD026 | 06/17/2013 19:30 | Nicholas W Shroyer | 1 |
| 06256 | Total Hardness as CaCO3 | SM 2340 B-1997 | 1 | 131716256001 | 06/20/2013 15:08 | Parker D Lindstrom | 1 |
| 07035 | Arsenic | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:31 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:31 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:31 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:31 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:31 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:31 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:31 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:31 | John P Hook | 1 |
| 07036 | Selenium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:31 | John P Hook | 1 |
| 07066 | Silver | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:31 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:31 | John P Hook | 1 |
| 00259 | Mercury | SW-846 7470A | 1 | 131675713002 | 06/18/2013 08:03 | Damary Valentin | 1 |
| 01848 | WW SW846 ICP Digest (tot rec) | SW-846 3005A | 1 | 131661848003 | 06/17/2013 10:17 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131675713002 | 06/17/2013 15:15 | Nelli S Markaryan | 1 |

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

**Sample Description:** WS-004(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094718**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:10 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

4-SFC SDG#: PEI23-06

| 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-004(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094718**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:10 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

4-SFC SDG#: PEI23-06

| 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 | 0.5 J | 0.1 | 0.5 | 1 |
| 02898 | 1,2,3-Trichlorobenzene | 87-61-6 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | Trichloroethene | 79-01-6 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | 1,2,3-Trichloropropane | 96-18-4 | N.D. | 0.3 | 1.0 | 1 |
| 02898 | 1,2,4-Trimethylbenzene | 95-63-6 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | 1,3,5-Trimethylbenzene | 108-67-8 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | Vinyl Chloride | 75-01-4 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | Xylene (Total) | 1330-20-7 | N.D. | 0.1 | 0.5 | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270C SIM** | | **ug/l** | **ug/l** | **ug/l** | |
| 08357 | Acenaphthene | 83-32-9 | N.D. | 0.010 | 0.052 | 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 | 0.012 J | 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 |
| **Metals** | **SM 2340 B-1997** | | **mg/l** | **mg/l** | **mg/l** | |
| 06256 | Total Hardness as CaCO3 | 471-34-1 | 34.4 | 0.064 | 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 | 0.0738 | 0.00033 | 0.0050 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.00052 J | 0.00036 | 0.0050 | 1 |
| 01750 | Calcium | 7440-70-2 | 10.1 | 0.0640 | 0.200 | 1 |

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

**Sample Description:** WS-004(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094718**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:10 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

4-SFC SDG#: PEI23-06

| 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** | |
| 07051 | Chromium | 7440-47-3 | 0.0031 J | 0.0011 | 0.0150 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0153 | 0.0051 | 0.0150 | 1 |
| 01757 | Magnesium | 7439-95-4 | 2.20 | 0.0606 | 0.100 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0044 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 | 0.0051 | 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

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 | C131682AA | 06/18/2013 02:09 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | C131682AA | 06/18/2013 02:09 | Kevin A Sposito | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13168WAD026 | 06/21/2013 16:38 | Joseph M Gambler | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13168WAD026 | 06/17/2013 19:30 | Nicholas W Shroyer | 1 |
| 06256 | Total Hardness as CaCO3 | SM 2340 B-1997 | 1 | 131716256001 | 06/20/2013 15:08 | Parker D Lindstrom | 1 |
| 07035 | Arsenic | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:35 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:35 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:35 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:35 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:35 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:35 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:35 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:35 | John P Hook | 1 |
| 07036 | Selenium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:35 | John P Hook | 1 |
| 07066 | Silver | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:35 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:35 | John P Hook | 1 |
| 00259 | Mercury | SW-846 7470A | 1 | 131675713002 | 06/18/2013 08:05 | Damary Valentin | 1 |
| 01848 | WW SW846 ICP Digest (tot rec) | SW-846 3005A | 1 | 131661848003 | 06/17/2013 10:17 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131675713002 | 06/17/2013 15:15 | Nelli S Markaryan | 1 |

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

**Sample Description:** WS-004(0.5-1.0)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094719**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:20 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

510-4 SDG#: PEI23-07

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B 25mL purge** | | ug/l | | ug/l | ug/l | |
| 02898 | Acetone | 67-64-1 | 3.3 | 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)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094719**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:20 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

510-4 SDG#: PEI23-07

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B 25mL 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 | 1.4 | 0.1 | 0.5 | 1 |
| 02898 | 1,2,3-Trichlorobenzene | 87-61-6 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | Trichloroethene | 79-01-6 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | 1,2,3-Trichloropropane | 96-18-4 | N.D. | 0.3 | 1.0 | 1 |
| 02898 | 1,2,4-Trimethylbenzene | 95-63-6 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | 1,3,5-Trimethylbenzene | 108-67-8 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | Vinyl Chloride | 75-01-4 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | Xylene (Total) | 1330-20-7 | N.D. | 0.1 | 0.5 | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270C SIM** | | **ug/l** | **ug/l** | **ug/l** | |
| 08357 | Acenaphthene | 83-32-9 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Acenaphthylene | 208-96-8 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Anthracene | 120-12-7 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Benzo(a)anthracene | 56-55-3 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Benzo(a)pyrene | 50-32-8 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Benzo(b)fluoranthene | 205-99-2 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Benzo(g,h,i)perylene | 191-24-2 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Benzo(k)fluoranthene | 207-08-9 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Chrysene | 218-01-9 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Fluoranthene | 206-44-0 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Fluorene | 86-73-7 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | 1-Methylnaphthalene | 90-12-0 | 0.012 J | 0.010 | 0.050 | 1 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Naphthalene | 91-20-3 | N.D. | 0.030 | 0.050 | 1 |
| 08357 | Phenanthrene | 85-01-8 | N.D. | 0.030 | 0.050 | 1 |
| 08357 | Pyrene | 129-00-0 | N.D. | 0.010 | 0.050 | 1 |
| **Metals** | **SM 2340 B-1997** | | **mg/l** | **mg/l** | **mg/l** | |
| 06256 | Total Hardness as CaCO3 | 471-34-1 | 21.2 | 0.064 | 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 | 0.0481 | 0.00033 | 0.0050 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.00044 J | 0.00036 | 0.0050 | 1 |
| 01750 | Calcium | 7440-70-2 | 4.91 | 0.0640 | 0.200 | 1 |

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

**Sample Description:** WS-004(0.5-1.0)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094719**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:20 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

510-4 SDG#: PEI23-07

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010B** | | **mg/l** | **mg/l** | **mg/l** | |
| 07051 | Chromium | 7440-47-3 | 0.0049 J | 0.0011 | 0.0150 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0201 | 0.0051 | 0.0150 | 1 |
| 01757 | Magnesium | 7439-95-4 | 2.16 | 0.0606 | 0.100 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0046 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 | 0.0064 | 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

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 | C131682AA | 06/18/2013 02:31 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | C131682AA | 06/18/2013 02:31 | Kevin A Sposito | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13168WAD026 | 06/21/2013 17:08 | Joseph M Gambler | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13168WAD026 | 06/17/2013 19:30 | Nicholas W Shroyer | 1 |
| 06256 | Total Hardness as CaCO3 | SM 2340 B-1997 | 1 | 131716256001 | 06/20/2013 15:08 | Parker D Lindstrom | 1 |
| 07035 | Arsenic | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:39 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:39 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:39 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:39 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:39 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:39 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:39 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:39 | John P Hook | 1 |
| 07036 | Selenium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:39 | John P Hook | 1 |
| 07066 | Silver | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:39 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:39 | John P Hook | 1 |
| 00259 | Mercury | SW-846 7470A | 1 | 131675713002 | 06/18/2013 08:07 | Damary Valentin | 1 |
| 01848 | WW SW846 ICP Digest (tot rec) | SW-846 3005A | 1 | 131661848003 | 06/17/2013 10:17 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131675713002 | 06/17/2013 15:15 | Nelli S Markaryan | 1 |

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

**Sample Description:** WS-007(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094720**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:40 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

7-SFC SDG#: PEI23-08BKG

| 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 | 3.7 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-007(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094720**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:40 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

7-SFC SDG#: PEI23-08BKG

| 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 | 0.5 J | 0.1 | 0.5 | 1 |
| 02898 | 1,2,3-Trichlorobenzene | 87-61-6 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | Trichloroethene | 79-01-6 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | 1,2,3-Trichloropropane | 96-18-4 | N.D. | 0.3 | 1.0 | 1 |
| 02898 | 1,2,4-Trimethylbenzene | 95-63-6 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | 1,3,5-Trimethylbenzene | 108-67-8 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | Vinyl Chloride | 75-01-4 | N.D. | 0.1 | 0.5 | 1 |
| 02898 | Xylene (Total) | 1330-20-7 | N.D. | 0.1 | 0.5 | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270C SIM** | | **ug/l** | **ug/l** | **ug/l** | |
| 08357 | Acenaphthene | 83-32-9 | 0.013 J | 0.010 | 0.050 | 1 |
| 08357 | Acenaphthylene | 208-96-8 | 0.015 J | 0.010 | 0.050 | 1 |
| 08357 | Anthracene | 120-12-7 | 0.026 J | 0.010 | 0.050 | 1 |
| 08357 | Benzo(a)anthracene | 56-55-3 | 0.085 | 0.010 | 0.050 | 1 |
| 08357 | Benzo(a)pyrene | 50-32-8 | 0.076 | 0.010 | 0.050 | 1 |
| 08357 | Benzo(b)fluoranthene | 205-99-2 | 0.11 | 0.010 | 0.050 | 1 |
| 08357 | Benzo(g,h,i)perylene | 191-24-2 | 0.056 | 0.010 | 0.050 | 1 |
| 08357 | Benzo(k)fluoranthene | 207-08-9 | 0.071 | 0.010 | 0.050 | 1 |
| 08357 | Chrysene | 218-01-9 | 0.22 | 0.010 | 0.050 | 1 |
| 08357 | Dibenz(a,h)anthracene | 53-70-3 | 0.021 J | 0.010 | 0.050 | 1 |
| 08357 | Fluoranthene | 206-44-0 | 0.30 | 0.010 | 0.050 | 1 |
| 08357 | Fluorene | 86-73-7 | 0.012 J | 0.010 | 0.050 | 1 |
| 08357 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.057 | 0.010 | 0.050 | 1 |
| 08357 | 1-Methylnaphthalene | 90-12-0 | 0.018 J | 0.010 | 0.050 | 1 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | 0.014 J | 0.010 | 0.050 | 1 |
| 08357 | Naphthalene | 91-20-3 | N.D. | 0.030 | 0.050 | 1 |
| 08357 | Phenanthrene | 85-01-8 | 0.076 | 0.030 | 0.050 | 1 |
| 08357 | Pyrene | 129-00-0 | 0.26 | 0.010 | 0.050 | 1 |
| **Metals** | **SM 2340 B-1997** | | **mg/l** | **mg/l** | **mg/l** | |
| 06256 | Total Hardness as CaCO3 | 471-34-1 | 18.7 | 0.064 | 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 | 0.0582 | 0.00033 | 0.0050 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.00039 J | 0.00036 | 0.0050 | 1 |
| 01750 | Calcium | 7440-70-2 | 4.19 | 0.0640 | 0.200 | 1 |

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

**Sample Description:** WS-007(Surface)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094720**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:40 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

7-SFC SDG#: PEI23-08BKG

| 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** | |
| 07051 | Chromium | 7440-47-3 | 0.0024 J | 0.0011 | 0.0150 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0057 J | 0.0051 | 0.0150 | 1 |
| 01757 | Magnesium | 7439-95-4 | 1.99 | 0.0606 | 0.100 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0027 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 | 0.0047 J | 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

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 | C131682AA | 06/18/2013 02:53 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | C131682AA | 06/18/2013 02:53 | Kevin A Sposito | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13168WAD026 | 06/21/2013 12:13 | Joseph M Gambler | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13168WAD026 | 06/17/2013 19:30 | Nicholas W Shroyer | 1 |
| 06256 | Total Hardness as CaCO3 | SM 2340 B-1997 | 1 | 131716256001 | 06/20/2013 15:08 | Parker D Lindstrom | 1 |
| 07035 | Arsenic | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:43 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:43 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:43 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:43 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:43 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:43 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:43 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:43 | John P Hook | 1 |
| 07036 | Selenium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:43 | John P Hook | 1 |
| 07066 | Silver | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:43 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:43 | John P Hook | 1 |
| 00259 | Mercury | SW-846 7470A | 1 | 131675713002 | 06/18/2013 08:09 | Damary Valentin | 1 |
| 01848 | WW SW846 ICP Digest (tot rec) | SW-846 3005A | 1 | 131661848003 | 06/17/2013 10:17 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131675713002 | 06/17/2013 15:15 | Nelli S Markaryan | 1 |

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

**Sample Description:** WS-007(Surface)061413 MS Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094721**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:40 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

7-SFC SDG#: PEI23-08MS

| 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 | 42 | 3.0 | 5.0 | 1 |
| 02898 | Allyl Chloride | 107-05-1 | 4.8 | 0.1 | 0.5 | 1 |
| 02898 | Benzene | 71-43-2 | 5.7 | 0.1 | 0.5 | 1 |
| 02898 | Bromobenzene | 108-86-1 | 5.4 | 0.1 | 0.5 | 1 |
| 02898 | Bromochloromethane | 74-97-5 | 5.9 | 0.1 | 0.5 | 1 |
| 02898 | Bromodichloromethane | 75-27-4 | 5.7 | 0.1 | 0.5 | 1 |
| 02898 | Bromoform | 75-25-2 | 6.1 | 0.1 | 0.5 | 1 |
| 02898 | Bromomethane | 74-83-9 | 5.1 | 0.1 | 0.5 | 1 |
| 02898 | 2-Butanone | 78-93-3 | 36 | 1.0 | 5.0 | 1 |
| 02898 | n-Butylbenzene | 104-51-8 | 5.1 | 0.1 | 0.5 | 1 |
| 02898 | sec-Butylbenzene | 135-98-8 | 5.3 | 0.1 | 0.5 | 1 |
| 02898 | tert-Butylbenzene | 98-06-6 | 5.4 | 0.1 | 0.5 | 1 |
| 02898 | Carbon Tetrachloride | 56-23-5 | 6.5 | 0.1 | 0.5 | 1 |
| 02898 | Chlorobenzene | 108-90-7 | 5.9 | 0.1 | 0.5 | 1 |
| 02898 | Chloroethane | 75-00-3 | 5.0 | 0.1 | 0.5 | 1 |
| 02898 | Chloroform | 67-66-3 | 5.8 | 0.1 | 0.5 | 1 |
| 02898 | Chloromethane | 74-87-3 | 4.5 | 0.2 | 0.5 | 1 |
| 02898 | 2-Chlorotoluene | 95-49-8 | 5.4 | 0.1 | 0.5 | 1 |
| 02898 | 4-Chlorotoluene | 106-43-4 | 5.6 | 0.1 | 0.5 | 1 |
| 02898 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5.0 | 0.2 | 0.5 | 1 |
| 02898 | Dibromochloromethane | 124-48-1 | 6.1 | 0.1 | 0.5 | 1 |
| 02898 | 1,2-Dibromoethane | 106-93-4 | 5.6 | 0.1 | 0.5 | 1 |
| 02898 | Dibromomethane | 74-95-3 | 5.7 | 0.1 | 0.5 | 1 |
| 02898 | 1,2-Dichlorobenzene | 95-50-1 | 5.4 | 0.1 | 0.5 | 1 |
| 02898 | 1,3-Dichlorobenzene | 541-73-1 | 5.5 | 0.1 | 0.5 | 1 |
| 02898 | 1,4-Dichlorobenzene | 106-46-7 | 5.4 | 0.1 | 0.5 | 1 |
| 02898 | Dichlorodifluoromethane | 75-71-8 | 4.4 | 0.1 | 0.5 | 1 |
| 02898 | 1,1-Dichloroethane | 75-34-3 | 5.5 | 0.1 | 0.5 | 1 |
| 02898 | 1,2-Dichloroethane | 107-06-2 | 5.5 | 0.1 | 0.5 | 1 |
| 02898 | 1,1-Dichloroethene | 75-35-4 | 6.3 | 0.1 | 0.5 | 1 |
| 02898 | cis-1,2-Dichloroethene | 156-59-2 | 5.8 | 0.1 | 0.5 | 1 |
| 02898 | trans-1,2-Dichloroethene | 156-60-5 | 6.2 | 0.1 | 0.5 | 1 |
| 02898 | Dichlorofluoromethane | 75-43-4 | 6.3 | 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 | 5.8 | 0.1 | 0.5 | 1 |
| 02898 | 1,1-Dichloropropene | 563-58-6 | 6.1 | 0.1 | 0.5 | 1 |
| 02898 | cis-1,3-Dichloropropene | 10061-01-5 | 5.1 | 0.1 | 0.5 | 1 |
| 02898 | trans-1,3-Dichloropropene | 10061-02-6 | 5.2 | 0.1 | 0.5 | 1 |
| 02898 | Ethyl ether | 60-29-7 | 4.6 | 0.1 | 0.5 | 1 |
| 02898 | Ethylbenzene | 100-41-4 | 5.6 | 0.1 | 0.5 | 1 |
| 02898 | Freon 113 | 76-13-1 | 6.4 | 0.2 | 0.5 | 1 |
| 02898 | Hexachlorobutadiene | 87-68-3 | 5.1 | 0.1 | 0.5 | 1 |
| 02898 | Isopropylbenzene | 98-82-8 | 5.6 | 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 | 4.9 | 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 | 5.8 | 0.2 | 0.5 | 1 |

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

**Sample Description:** WS-007(Surface)061413 MS Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094721**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:40 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

7-SFC SDG#: PEI23-08MS

| 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 | 5.3 | 0.1 | 0.5 | 1 |
| 02898 | Styrene | 100-42-5 | 5.9 | 0.1 | 0.5 | 1 |
| 02898 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 6.0 | 0.1 | 0.5 | 1 |
| 02898 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5.1 | 0.1 | 0.5 | 1 |
| 02898 | Tetrachloroethene | 127-18-4 | 6.0 | 0.1 | 0.5 | 1 |
| 02898 | Tetrahydrofuran | 109-99-9 | 24 | 2.0 | 5.0 | 1 |
| 02898 | Toluene | 108-88-3 | 6.1 | 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 | 4.5 | 0.1 | 0.5 | 1 |
| 02898 | 1,1,1-Trichloroethane | 71-55-6 | 6.0 | 0.1 | 0.5 | 1 |
| 02898 | 1,1,2-Trichloroethane | 79-00-5 | 5.7 | 0.1 | 0.5 | 1 |
| 02898 | Trichloroethene | 79-01-6 | 6.0 | 0.1 | 0.5 | 1 |
| 02898 | Trichlorofluoromethane | 75-69-4 | 5.3 | 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 | 5.4 | 0.1 | 0.5 | 1 |
| 02898 | Vinyl Chloride | 75-01-4 | 4.8 | 0.1 | 0.5 | 1 |
| 02898 | Xylene (Total) | 1330-20-7 | 17 | 0.1 | 0.5 | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270C SIM** | | **ug/l** | **ug/l** | **ug/l** | |
| 08357 | Acenaphthene | 83-32-9 | 0.97 | 0.010 | 0.051 | 1 |
| 08357 | Acenaphthylene | 208-96-8 | 1.1 | 0.010 | 0.051 | 1 |
| 08357 | Anthracene | 120-12-7 | 1.0 | 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 | 0.78 | 0.010 | 0.051 | 1 |
| 08357 | Benzo(b)fluoranthene | 205-99-2 | 0.75 | 0.010 | 0.051 | 1 |
| 08357 | Benzo(g,h,i)perylene | 191-24-2 | 0.67 | 0.010 | 0.051 | 1 |
| 08357 | Benzo(k)fluoranthene | 207-08-9 | 0.74 | 0.010 | 0.051 | 1 |
| 08357 | Chrysene | 218-01-9 | 0.81 | 0.010 | 0.051 | 1 |
| 08357 | Dibenz(a,h)anthracene | 53-70-3 | 0.67 | 0.010 | 0.051 | 1 |
| 08357 | Fluoranthene | 206-44-0 | 1.1 | 0.010 | 0.051 | 1 |
| 08357 | Fluorene | 86-73-7 | 1.0 | 0.010 | 0.051 | 1 |
| 08357 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.70 | 0.010 | 0.051 | 1 |
| 08357 | 1-Methylnaphthalene | 90-12-0 | 1.1 | 0.010 | 0.051 | 1 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | 1.0 | 0.010 | 0.051 | 1 |
| 08357 | Naphthalene | 91-20-3 | 1.0 | 0.030 | 0.051 | 1 |
| 08357 | Phenanthrene | 85-01-8 | 1.1 | 0.030 | 0.051 | 1 |
| 08357 | Pyrene | 129-00-0 | 1.1 | 0.010 | 0.051 | 1 |
| **Metals** | **SM 2340 B-1997** | | **mg/l** | **mg/l** | **mg/l** | |
| 06256 | Total Hardness as CaCO3 | 471-34-1 | 38.8 | 0.064 | 0.20 | 1 |
| | **SW-846 6010B** | | **mg/l** | **mg/l** | **mg/l** | |
| 07035 | Arsenic | 7440-38-2 | 0.156 | 0.0068 | 0.0200 | 1 |
| 07046 | Barium | 7440-39-3 | 2.06 | 0.00033 | 0.0050 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0507 | 0.00036 | 0.0050 | 1 |
| 01750 | Calcium | 7440-70-2 | 8.65 | 0.0640 | 0.200 | 1 |

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

**Sample Description:** WS-007(Surface)061413 MS Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094721**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:40 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

7-SFC SDG#: PEI23-08MS

| 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 | |
| 07051 | Chromium | 7440-47-3 | 0.206 | 0.0011 | 0.0150 | 1 |
| 07055 | Lead | 7439-92-1 | 0.159 | 0.0051 | 0.0150 | 1 |
| 01757 | Magnesium | 7439-95-4 | 4.18 | 0.0606 | 0.100 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.518 | 0.0011 | 0.0100 | 1 |
| 07036 | Selenium | 7782-49-2 | 0.149 | 0.0075 | 0.0200 | 1 |
| 07066 | Silver | 7440-22-4 | 0.0520 | 0.0012 | 0.0050 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.528 | 0.0013 | 0.0050 | 1 |
| | **SW-846 7470A** | | mg/l | mg/l | mg/l | |
| 00259 | Mercury | 7439-97-6 | 0.0010 | 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 | C131682AA | 06/18/2013 03:15 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | C131682AA | 06/18/2013 03:15 | Kevin A Sposito | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13168WAD026 | 06/21/2013 12:42 | Joseph M Gambler | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13168WAD026 | 06/17/2013 19:30 | Nicholas W Shroyer | 1 |
| 06256 | Total Hardness as CaCO3 | SM 2340 B-1997 | 1 | 131716256001 | 06/20/2013 15:08 | Parker D Lindstrom | 1 |
| 07035 | Arsenic | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:55 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:55 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:55 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:55 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:55 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:55 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:55 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:55 | John P Hook | 1 |
| 07036 | Selenium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:55 | John P Hook | 1 |
| 07066 | Silver | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:55 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:55 | John P Hook | 1 |
| 00259 | Mercury | SW-846 7470A | 1 | 131675713002 | 06/18/2013 08:13 | Damary Valentin | 1 |
| 01848 | WW SW846 ICP Digest (tot rec) | SW-846 3005A | 1 | 131661848003 | 06/17/2013 10:17 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131675713002 | 06/17/2013 15:15 | Nelli S Markaryan | 1 |

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

**Sample Description:** WS-007(Surface)061413 MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094722**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:40 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

7-SFC SDG#: PEI23-08MSD

| 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 | 46 | 3.0 | 5.0 | 1 |
| 02898 | Allyl Chloride | 107-05-1 | 4.9 | 0.1 | 0.5 | 1 |
| 02898 | Benzene | 71-43-2 | 5.7 | 0.1 | 0.5 | 1 |
| 02898 | Bromobenzene | 108-86-1 | 5.6 | 0.1 | 0.5 | 1 |
| 02898 | Bromochloromethane | 74-97-5 | 5.8 | 0.1 | 0.5 | 1 |
| 02898 | Bromodichloromethane | 75-27-4 | 5.7 | 0.1 | 0.5 | 1 |
| 02898 | Bromoform | 75-25-2 | 6.1 | 0.1 | 0.5 | 1 |
| 02898 | Bromomethane | 74-83-9 | 5.2 | 0.1 | 0.5 | 1 |
| 02898 | 2-Butanone | 78-93-3 | 39 | 1.0 | 5.0 | 1 |
| 02898 | n-Butylbenzene | 104-51-8 | 5.2 | 0.1 | 0.5 | 1 |
| 02898 | sec-Butylbenzene | 135-98-8 | 5.4 | 0.1 | 0.5 | 1 |
| 02898 | tert-Butylbenzene | 98-06-6 | 5.6 | 0.1 | 0.5 | 1 |
| 02898 | Carbon Tetrachloride | 56-23-5 | 6.5 | 0.1 | 0.5 | 1 |
| 02898 | Chlorobenzene | 108-90-7 | 6.0 | 0.1 | 0.5 | 1 |
| 02898 | Chloroethane | 75-00-3 | 5.0 | 0.1 | 0.5 | 1 |
| 02898 | Chloroform | 67-66-3 | 5.8 | 0.1 | 0.5 | 1 |
| 02898 | Chloromethane | 74-87-3 | 4.6 | 0.2 | 0.5 | 1 |
| 02898 | 2-Chlorotoluene | 95-49-8 | 5.5 | 0.1 | 0.5 | 1 |
| 02898 | 4-Chlorotoluene | 106-43-4 | 5.6 | 0.1 | 0.5 | 1 |
| 02898 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5.6 | 0.2 | 0.5 | 1 |
| 02898 | Dibromochloromethane | 124-48-1 | 6.1 | 0.1 | 0.5 | 1 |
| 02898 | 1,2-Dibromoethane | 106-93-4 | 5.7 | 0.1 | 0.5 | 1 |
| 02898 | Dibromomethane | 74-95-3 | 5.7 | 0.1 | 0.5 | 1 |
| 02898 | 1,2-Dichlorobenzene | 95-50-1 | 5.5 | 0.1 | 0.5 | 1 |
| 02898 | 1,3-Dichlorobenzene | 541-73-1 | 5.5 | 0.1 | 0.5 | 1 |
| 02898 | 1,4-Dichlorobenzene | 106-46-7 | 5.5 | 0.1 | 0.5 | 1 |
| 02898 | Dichlorodifluoromethane | 75-71-8 | 4.5 | 0.1 | 0.5 | 1 |
| 02898 | 1,1-Dichloroethane | 75-34-3 | 5.6 | 0.1 | 0.5 | 1 |
| 02898 | 1,2-Dichloroethane | 107-06-2 | 5.7 | 0.1 | 0.5 | 1 |
| 02898 | 1,1-Dichloroethene | 75-35-4 | 6.4 | 0.1 | 0.5 | 1 |
| 02898 | cis-1,2-Dichloroethene | 156-59-2 | 5.9 | 0.1 | 0.5 | 1 |
| 02898 | trans-1,2-Dichloroethene | 156-60-5 | 6.3 | 0.1 | 0.5 | 1 |
| 02898 | Dichlorofluoromethane | 75-43-4 | 6.4 | 0.2 | 0.5 | 1 |
| 02898 | 1,2-Dichloropropane | 78-87-5 | 5.8 | 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 | 5.9 | 0.1 | 0.5 | 1 |
| 02898 | 1,1-Dichloropropene | 563-58-6 | 6.2 | 0.1 | 0.5 | 1 |
| 02898 | cis-1,3-Dichloropropene | 10061-01-5 | 5.3 | 0.1 | 0.5 | 1 |
| 02898 | trans-1,3-Dichloropropene | 10061-02-6 | 5.3 | 0.1 | 0.5 | 1 |
| 02898 | Ethyl ether | 60-29-7 | 4.9 | 0.1 | 0.5 | 1 |
| 02898 | Ethylbenzene | 100-41-4 | 5.6 | 0.1 | 0.5 | 1 |
| 02898 | Freon 113 | 76-13-1 | 6.4 | 0.2 | 0.5 | 1 |
| 02898 | Hexachlorobutadiene | 87-68-3 | 5.1 | 0.1 | 0.5 | 1 |
| 02898 | Isopropylbenzene | 98-82-8 | 5.7 | 0.1 | 0.5 | 1 |
| 02898 | p-Isopropyltoluene | 99-87-6 | 5.4 | 0.1 | 0.5 | 1 |
| 02898 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5.0 | 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 | 5.9 | 0.2 | 0.5 | 1 |

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

**Sample Description:** WS-007(Surface)061413 MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094722**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:40 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

7-SFC SDG#: PEI23-08MSD

| 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 | 5.4 | 0.1 | 0.5 | 1 |
| 02898 | Styrene | 100-42-5 | 5.9 | 0.1 | 0.5 | 1 |
| 02898 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5.9 | 0.1 | 0.5 | 1 |
| 02898 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5.2 | 0.1 | 0.5 | 1 |
| 02898 | Tetrachloroethene | 127-18-4 | 6.1 | 0.1 | 0.5 | 1 |
| 02898 | Tetrahydrofuran | 109-99-9 | 26 | 2.0 | 5.0 | 1 |
| 02898 | Toluene | 108-88-3 | 6.6 | 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 | 4.5 | 0.1 | 0.5 | 1 |
| 02898 | 1,1,1-Trichloroethane | 71-55-6 | 6.1 | 0.1 | 0.5 | 1 |
| 02898 | 1,1,2-Trichloroethane | 79-00-5 | 5.7 | 0.1 | 0.5 | 1 |
| 02898 | Trichloroethene | 79-01-6 | 6.1 | 0.1 | 0.5 | 1 |
| 02898 | Trichlorofluoromethane | 75-69-4 | 5.5 | 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 | 5.4 | 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 | 5.0 | 0.1 | 0.5 | 1 |
| 02898 | Xylene (Total) | 1330-20-7 | 17 | 0.1 | 0.5 | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270C SIM** | | **ug/l** | **ug/l** | **ug/l** | |
| 08357 | Acenaphthene | 83-32-9 | 1.0 | 0.011 | 0.053 | 1 |
| 08357 | Acenaphthylene | 208-96-8 | 1.1 | 0.011 | 0.053 | 1 |
| 08357 | Anthracene | 120-12-7 | 1.0 | 0.011 | 0.053 | 1 |
| 08357 | Benzo(a)anthracene | 56-55-3 | 0.86 | 0.011 | 0.053 | 1 |
| 08357 | Benzo(a)pyrene | 50-32-8 | 0.74 | 0.011 | 0.053 | 1 |
| 08357 | Benzo(b)fluoranthene | 205-99-2 | 0.70 | 0.011 | 0.053 | 1 |
| 08357 | Benzo(g,h,i)perylene | 191-24-2 | 0.68 | 0.011 | 0.053 | 1 |
| 08357 | Benzo(k)fluoranthene | 207-08-9 | 0.74 | 0.011 | 0.053 | 1 |
| 08357 | Chrysene | 218-01-9 | 0.83 | 0.011 | 0.053 | 1 |
| 08357 | Dibenz(a,h)anthracene | 53-70-3 | 0.71 | 0.011 | 0.053 | 1 |
| 08357 | Fluoranthene | 206-44-0 | 1.0 | 0.011 | 0.053 | 1 |
| 08357 | Fluorene | 86-73-7 | 1.0 | 0.011 | 0.053 | 1 |
| 08357 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.71 | 0.011 | 0.053 | 1 |
| 08357 | 1-Methylnaphthalene | 90-12-0 | 1.1 | 0.011 | 0.053 | 1 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | 1.1 | 0.011 | 0.053 | 1 |
| 08357 | Naphthalene | 91-20-3 | 1.0 | 0.032 | 0.053 | 1 |
| 08357 | Phenanthrene | 85-01-8 | 1.1 | 0.032 | 0.053 | 1 |
| 08357 | Pyrene | 129-00-0 | 1.0 | 0.011 | 0.053 | 1 |
| **Metals** | **SM 2340 B-1997** | | **mg/l** | **mg/l** | **mg/l** | |
| 06256 | Total Hardness as CaCO3 | 471-34-1 | 36.4 | 0.064 | 0.20 | 1 |
| | **SW-846 6010B** | | **mg/l** | **mg/l** | **mg/l** | |
| 07035 | Arsenic | 7440-38-2 | 0.155 | 0.0068 | 0.0200 | 1 |
| 07046 | Barium | 7440-39-3 | 2.05 | 0.00033 | 0.0050 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0502 | 0.00036 | 0.0050 | 1 |
| 01750 | Calcium | 7440-70-2 | 8.01 | 0.0640 | 0.200 | 1 |

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

**Sample Description:** WS-007(Surface)061413 MSD Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094722**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:40 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

7-SFC SDG#: PEI23-08MSD

| 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** | |
| 07051 | Chromium | 7440-47-3 | 0.203 | 0.0011 | 0.0150 | 1 |
| 07055 | Lead | 7439-92-1 | 0.157 | 0.0051 | 0.0150 | 1 |
| 01757 | Magnesium | 7439-95-4 | 3.97 | 0.0606 | 0.100 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.516 | 0.0011 | 0.0100 | 1 |
| 07036 | Selenium | 7782-49-2 | 0.149 | 0.0075 | 0.0200 | 1 |
| 07066 | Silver | 7440-22-4 | 0.0524 | 0.0012 | 0.0050 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.524 | 0.0013 | 0.0050 | 1 |
| | | **SW-846 7470A** | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | Mercury | 7439-97-6 | 0.0010 | 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 | C131682AA | 06/18/2013 03:37 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | C131682AA | 06/18/2013 03:37 | Kevin A Sposito | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13168WAD026 | 06/21/2013 13:11 | Joseph M Gambler | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13168WAD026 | 06/17/2013 19:30 | Nicholas W Shroyer | 1 |
| 06256 | Total Hardness as CaCO3 | SM 2340 B-1997 | 1 | 131716256001 | 06/20/2013 15:08 | Parker D Lindstrom | 1 |
| 07035 | Arsenic | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:59 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:59 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:59 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:59 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:59 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:59 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:59 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:59 | John P Hook | 1 |
| 07036 | Selenium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:59 | John P Hook | 1 |
| 07066 | Silver | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:59 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:59 | John P Hook | 1 |
| 00259 | Mercury | SW-846 7470A | 1 | 131675713002 | 06/18/2013 08:15 | Damary Valentin | 1 |
| 01848 | WW SW846 ICP Digest (tot rec) | SW-846 3005A | 1 | 131661848003 | 06/17/2013 10:17 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131675713002 | 06/17/2013 15:15 | Nelli S Markaryan | 1 |

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

**Sample Description:** WS-007(Surface)061413 DUP Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094723**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:40 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

7-SFC SDG#: PEI23-08DUP

| 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 | 18.5 | 0.064 | 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 | 0.0581 | 0.00033 | 0.0050 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.00045 J | 0.00036 | 0.0050 | 1 |
| 01750 | Calcium | 7440-70-2 | 4.18 | 0.0640 | 0.200 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0026 J | 0.0011 | 0.0150 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0058 J | 0.0051 | 0.0150 | 1 |
| 01757 | Magnesium | 7439-95-4 | 1.96 | 0.0606 | 0.100 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0028 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 | 0.0051 | 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

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 | 131716256001 | 06/20/2013 15:08 | Parker D Lindstrom | 1 |
| 07035 | Arsenic | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:51 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:51 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:51 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:51 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:51 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:51 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:51 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:51 | John P Hook | 1 |
| 07036 | Selenium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:51 | John P Hook | 1 |
| 07066 | Silver | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:51 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 20:51 | John P Hook | 1 |
| 00259 | Mercury | SW-846 7470A | 1 | 131675713002 | 06/18/2013 08:11 | Damary Valentin | 1 |
| 01848 | WW SW846 ICP Digest (tot rec) | SW-846 3005A | 1 | 131661848003 | 06/17/2013 10:17 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131675713002 | 06/17/2013 15:15 | Nelli S Markaryan | 1 |

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

**Sample Description:** WS-007(0.5-1.0)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample #** WW 7094724
**LLI Group #** 1397455
**Account #** 14739

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

Collected: 06/14/2013 09:50 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

510-7 SDG#: PEI23-09

| 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 | 3.4 | 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-007(0.5-1.0)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094724**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:50 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

510-7 SDG#: PEI23-09

| 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 | 5.1 | | 0.1 | 0.5 | 1 |
| 02898 | 1,2,3-Trichlorobenzene | 87-61-6 | 0.1 | J | 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 | 0.036 | J | 0.010 | 0.051 | 1 |
| 08357 | Acenaphthylene | 208-96-8 | 0.075 | | 0.010 | 0.051 | 1 |
| 08357 | Anthracene | 120-12-7 | 0.12 | | 0.010 | 0.051 | 1 |
| 08357 | Benzo(a)anthracene | 56-55-3 | 0.40 | | 0.010 | 0.051 | 1 |
| 08357 | Benzo(a)pyrene | 50-32-8 | 0.41 | | 0.010 | 0.051 | 1 |
| 08357 | Benzo(b)fluoranthene | 205-99-2 | 0.61 | | 0.010 | 0.051 | 1 |
| 08357 | Benzo(g,h,i)perylene | 191-24-2 | 0.32 | | 0.010 | 0.051 | 1 |
| 08357 | Benzo(k)fluoranthene | 207-08-9 | 0.41 | | 0.010 | 0.051 | 1 |
| 08357 | Chrysene | 218-01-9 | 0.99 | | 0.010 | 0.051 | 1 |
| 08357 | Dibenz(a,h)anthracene | 53-70-3 | 0.086 | | 0.010 | 0.051 | 1 |
| 08357 | Fluoranthene | 206-44-0 | 1.7 | | 0.010 | 0.051 | 1 |
| 08357 | Fluorene | 86-73-7 | 0.051 | | 0.010 | 0.051 | 1 |
| 08357 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.33 | | 0.010 | 0.051 | 1 |
| 08357 | 1-Methylnaphthalene | 90-12-0 | 0.022 | J | 0.010 | 0.051 | 1 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | 0.020 | J | 0.010 | 0.051 | 1 |
| 08357 | Naphthalene | 91-20-3 | N.D. | | 0.030 | 0.051 | 1 |
| 08357 | Phenanthrene | 85-01-8 | 0.34 | | 0.030 | 0.051 | 1 |
| 08357 | Pyrene | 129-00-0 | 1.6 | | 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 | 26.2 | | 0.064 | 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 | 0.123 | | 0.00033 | 0.0050 | 1 |

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

**Sample Description:** WS-007(0.5-1.0)061413 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094724**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 09:50 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

510-7 SDG#: PEI23-09

| 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** | |
| 07049 | Cadmium | 7440-43-9 | 0.00077 J | 0.00036 | 0.0050 | 1 |
| 01750 | Calcium | 7440-70-2 | 5.10 | 0.0640 | 0.200 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0124 J | 0.0011 | 0.0150 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0356 | 0.0051 | 0.0150 | 1 |
| 01757 | Magnesium | 7439-95-4 | 3.28 | 0.0606 | 0.100 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0105 | 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 | 0.0188 | 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

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 | C131682AA | 06/18/2013 03:59 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | C131682AA | 06/18/2013 03:59 | Kevin A Sposito | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13168WAD026 | 06/22/2013 09:10 | Linda M Hartenstine | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13168WAD026 | 06/17/2013 19:30 | Nicholas W Shroyer | 1 |
| 06256 | Total Hardness as CaCO3 | SM 2340 B-1997 | 1 | 131716256001 | 06/20/2013 15:08 | Parker D Lindstrom | 1 |
| 07035 | Arsenic | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:43 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:43 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:43 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:43 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:43 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:43 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:43 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:43 | John P Hook | 1 |
| 07036 | Selenium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:43 | John P Hook | 1 |
| 07066 | Silver | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:43 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:43 | John P Hook | 1 |
| 00259 | Mercury | SW-846 7470A | 1 | 131675713002 | 06/18/2013 08:17 | Damary Valentin | 1 |
| 01848 | WW SW846 ICP Digest (tot rec) | SW-846 3005A | 1 | 131661848003 | 06/17/2013 10:17 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131675713002 | 06/17/2013 15:15 | Nelli S Markaryan | 1 |

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

**Sample Description:** WS-006(Surface)040813 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094725**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 10:20 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

6-SFC SDG#: PEI23-10

| 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-006(Surface)040813 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094725**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 10:20 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

6-SFC SDG#: PEI23-10

| 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 |
| **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 |
| **Metals** | **SM 2340 B-1997** | | **mg/l** | **mg/l** | **mg/l** | |
| 06256 | Total Hardness as CaCO3 | 471-34-1 | 19.7 | 0.064 | 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 | 0.0189 | 0.00033 | 0.0050 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.00041 J | 0.00036 | 0.0050 | 1 |
| 01750 | Calcium | 7440-70-2 | 4.47 | 0.0640 | 0.200 | 1 |

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

**Sample Description:** WS-006(Surface)040813 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094725**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 10:20 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

6-SFC SDG#: PEI23-10

| 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** | |
| 07051 | Chromium | 7440-47-3 | N.D. | 0.0011 | 0.0150 | 1 |
| 07055 | Lead | 7439-92-1 | N.D. | 0.0051 | 0.0150 | 1 |
| 01757 | Magnesium | 7439-95-4 | 2.07 | 0.0606 | 0.100 | 1 |
| 07061 | Nickel | 7440-02-0 | N.D. | 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

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 | C131682AA | 06/18/2013 04:21 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | C131682AA | 06/18/2013 04:21 | Kevin A Sposito | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13168WAD026 | 06/22/2013 09:39 | Linda M Hartenstine | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13168WAD026 | 06/17/2013 19:30 | Nicholas W Shroyer | 1 |
| 06256 | Total Hardness as CaCO3 | SM 2340 B-1997 | 1 | 131716256001 | 06/20/2013 15:08 | Parker D Lindstrom | 1 |
| 07035 | Arsenic | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:47 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:47 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:47 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:47 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:47 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:47 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:47 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:47 | John P Hook | 1 |
| 07036 | Selenium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:47 | John P Hook | 1 |
| 07066 | Silver | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:47 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:47 | John P Hook | 1 |
| 00259 | Mercury | SW-846 7470A | 1 | 131675713002 | 06/18/2013 08:19 | Damary Valentin | 1 |
| 01848 | WW SW846 ICP Digest (tot rec) | SW-846 3005A | 1 | 131661848003 | 06/17/2013 10:17 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131675713002 | 06/17/2013 15:15 | Nelli S Markaryan | 1 |

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

**Sample Description:** WS-006(0.5-1.0)040813 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094726**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 10:30 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

510-6 SDG#: PEI23-11

| 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-006(0.5-1.0)040813 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094726**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 10:30 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

510-6 SDG#: PEI23-11

| 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 |
| **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 | 19.8 | 0.064 | 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 | 0.0201 | 0.00033 | 0.0050 | 1 |

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

**Sample Description:** WS-006(0.5-1.0)040813 Grab Surface Water
Mayflower, AR
Pipeline Incident

**LLI Sample # WW 7094726**
**LLI Group # 1397455**
**Account # 14739**

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

Collected: 06/14/2013 10:30 by TM

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

510-6 SDG#: PEI23-11

| 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** | |
| 07049 | Cadmium | 7440-43-9 | N.D. | 0.00036 | 0.0050 | 1 |
| 01750 | Calcium | 7440-70-2 | 4.50 | 0.0640 | 0.200 | 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 |
| 01757 | Magnesium | 7439-95-4 | 2.09 | 0.0606 | 0.100 | 1 |
| 07061 | Nickel | 7440-02-0 | N.D. | 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

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 | C131682AA | 06/18/2013 04:44 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | C131682AA | 06/18/2013 04:44 | Kevin A Sposito | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13168WAD026 | 06/22/2013 10:09 | Linda M Hartenstine | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13168WAD026 | 06/17/2013 19:30 | Nicholas W Shroyer | 1 |
| 06256 | Total Hardness as CaCO3 | SM 2340 B-1997 | 1 | 131716256001 | 06/20/2013 15:08 | Parker D Lindstrom | 1 |
| 07035 | Arsenic | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:51 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:51 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:51 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:51 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:51 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:51 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:51 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:51 | John P Hook | 1 |
| 07036 | Selenium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:51 | John P Hook | 1 |
| 07066 | Silver | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:51 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010B | 1 | 131661848003 | 06/19/2013 21:51 | John P Hook | 1 |
| 00259 | Mercury | SW-846 7470A | 1 | 131675713002 | 06/18/2013 08:21 | Damary Valentin | 1 |
| 01848 | WW SW846 ICP Digest (tot rec) | SW-846 3005A | 1 | 131661848003 | 06/17/2013 10:17 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131675713002 | 06/17/2013 15:15 | Nelli S Markaryan | 1 |

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

**Sample Description:** WS-TB-73-061413 Water
Mayflower, AR
Pipeline Incident

**LLI Sample #** WW 7094727
**LLI Group #** 1397455
**Account #** 14739

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

Collected: 06/14/2013

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

73-TB SDG#: PEI23-12TB*

| 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-73-061413 Water
Mayflower, AR
Pipeline Incident

**LLI Sample #** WW 7094727
**LLI Group #** 1397455
**Account #** 14739

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

Collected: 06/14/2013

Submitted: 06/15/2013 09:30
Reported: 06/23/2013 18:46

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

73-TB SDG#: PEI23-12TB*

| 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 |

## 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 | C131682AA | 06/17/2013 23:10 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | C131682AA | 06/17/2013 23:10 | Kevin A Sposito | 1 |

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

# Quality Control Summary

Client Name: ExxonMobil Group Number: 1397455
Reported: 06/23/13 at 06:46 PM

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: C131682AA | Sample number(s): 7094713-7094722,7094724-7094727 | | | | | | | | |
| Acetone | N.D. | 3.0 | 5.0 | ug/l | 114 | | 73-135 | | |
| Allyl Chloride | N.D. | 0.1 | 0.5 | ug/l | 88 | | 61-130 | | |
| Benzene | N.D. | 0.1 | 0.5 | ug/l | 104 | | 80-120 | | |
| Bromobenzene | N.D. | 0.1 | 0.5 | ug/l | 105 | | 80-120 | | |
| Bromochloromethane | N.D. | 0.1 | 0.5 | ug/l | 112 | | 80-125 | | |
| Bromodichloromethane | N.D. | 0.1 | 0.5 | ug/l | 107 | | 80-120 | | |
| Bromoform | N.D. | 0.1 | 0.5 | ug/l | 121 | | 63-132 | | |
| Bromomethane | N.D. | 0.1 | 0.5 | ug/l | 99 | | 38-146 | | |
| 2-Butanone | N.D. | 1.0 | 5.0 | ug/l | 105 | | 70-130 | | |
| n-Butylbenzene | N.D. | 0.1 | 0.5 | ug/l | 97 | | 80-120 | | |
| sec-Butylbenzene | N.D. | 0.1 | 0.5 | ug/l | 100 | | 80-120 | | |
| tert-Butylbenzene | N.D. | 0.1 | 0.5 | ug/l | 102 | | 80-120 | | |
| Carbon Tetrachloride | N.D. | 0.1 | 0.5 | ug/l | 114 | | 74-133 | | |
| Chlorobenzene | N.D. | 0.1 | 0.5 | ug/l | 110 | | 80-120 | | |
| Chloroethane | N.D. | 0.1 | 0.5 | ug/l | 96 | | 67-124 | | |
| Chloroform | N.D. | 0.1 | 0.5 | ug/l | 107 | | 80-120 | | |
| Chloromethane | N.D. | 0.2 | 0.5 | ug/l | 86 | | 55-135 | | |
| 2-Chlorotoluene | N.D. | 0.1 | 0.5 | ug/l | 103 | | 80-120 | | |
| 4-Chlorotoluene | N.D. | 0.1 | 0.5 | ug/l | 106 | | 80-120 | | |
| 1,2-Dibromo-3-chloropropane | N.D. | 0.2 | 0.5 | ug/l | 117 | | 57-141 | | |
| Dibromochloromethane | N.D. | 0.1 | 0.5 | ug/l | 116 | | 80-126 | | |
| 1,2-Dibromoethane | N.D. | 0.1 | 0.5 | ug/l | 109 | | 80-120 | | |
| Dibromomethane | N.D. | 0.1 | 0.5 | ug/l | 108 | | 80-120 | | |
| 1,2-Dichlorobenzene | N.D. | 0.1 | 0.5 | ug/l | 106 | | 80-120 | | |
| 1,3-Dichlorobenzene | N.D. | 0.1 | 0.5 | ug/l | 106 | | 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 | 102 | | 80-120 | | |
| 1,2-Dichloroethane | N.D. | 0.1 | 0.5 | ug/l | 108 | | 80-127 | | |
| 1,1-Dichloroethene | N.D. | 0.1 | 0.5 | ug/l | 111 | | 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 | 110 | | 80-120 | | |
| Dichlorofluoromethane | N.D. | 0.2 | 0.5 | ug/l | 122 | | 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 | 101 | | 80-120 | | |
| 2,2-Dichloropropane | N.D. | 0.1 | 0.5 | ug/l | 104 | | 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 | 100 | | 73-126 | | |
| Ethyl ether | N.D. | 0.1 | 0.5 | ug/l | 100 | | 59-130 | | |
| Ethylbenzene | N.D. | 0.1 | 0.5 | ug/l | 103 | | 80-120 | | |
| Freon 113 | N.D. | 0.2 | 0.5 | ug/l | 113 | | 78-132 | | |
| Hexachlorobutadiene | N.D. | 0.1 | 0.5 | ug/l | 96 | | 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: 1397455
Reported: 06/23/13 at 06:46 PM

| 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 | 103 | | 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 | 95 | | 80-125 | | |
| 4-Methyl-2-Pentanone | N.D. | 1.0 | 5.0 | ug/l | 95 | | 69-135 | | |
| Methylene Chloride | N.D. | 0.2 | 0.5 | ug/l | 109 | | 80-120 | | |
| n-Propylbenzene | N.D. | 0.1 | 0.5 | ug/l | 99 | | 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 | 112 | | 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 | 109 | | 80-120 | | |
| Tetrahydrofuran | N.D. | 2.0 | 5.0 | ug/l | 109 | | 65-131 | | |
| Toluene | N.D. | 0.1 | 0.5 | ug/l | 105 | | 80-120 | | |
| 1,2,3-Trichlorobenzene | N.D. | 0.1 | 0.5 | ug/l | 80 | | 63-120 | | |
| 1,2,4-Trichlorobenzene | N.D. | 0.1 | 0.5 | ug/l | 86 | | 70-120 | | |
| 1,1,1-Trichloroethane | N.D. | 0.1 | 0.5 | ug/l | 107 | | 79-127 | | |
| 1,1,2-Trichloroethane | N.D. | 0.1 | 0.5 | ug/l | 109 | | 80-120 | | |
| Trichloroethene | N.D. | 0.1 | 0.5 | ug/l | 109 | | 80-120 | | |
| Trichlorofluoromethane | N.D. | 0.1 | 0.5 | ug/l | 101 | | 77-132 | | |
| 1,2,3-Trichloropropane | N.D. | 0.3 | 1.0 | ug/l | 104 | | 80-120 | | |
| 1,2,4-Trimethylbenzene | N.D. | 0.1 | 0.5 | ug/l | 101 | | 80-120 | | |
| 1,3,5-Trimethylbenzene | N.D. | 0.1 | 0.5 | ug/l | 101 | | 80-120 | | |
| Vinyl Chloride | N.D. | 0.1 | 0.5 | ug/l | 92 | | 65-127 | | |
| Xylene (Total) | N.D. | 0.1 | 0.5 | ug/l | 106 | | 80-120 | | |
| Batch number: 13168WAD026 | Sample number(s): 7094713-7094722,7094724-7094726 | | | | | | | | |
| Acenaphthene | N.D. | 0.010 | 0.050 | ug/l | 91 | | 65-124 | | |
| Acenaphthylene | N.D. | 0.010 | 0.050 | ug/l | 100 | | 72-113 | | |
| Anthracene | N.D. | 0.010 | 0.050 | ug/l | 97 | | 70-117 | | |
| Benzo(a)anthracene | N.D. | 0.010 | 0.050 | ug/l | 93 | | 75-115 | | |
| Benzo(a)pyrene | N.D. | 0.010 | 0.050 | ug/l | 99 | | 72-120 | | |
| Benzo(b)fluoranthene | N.D. | 0.010 | 0.050 | ug/l | 86 | | 74-130 | | |
| Benzo(g,h,i)perylene | N.D. | 0.010 | 0.050 | ug/l | 94 | | 63-121 | | |
| Benzo(k)fluoranthene | N.D. | 0.010 | 0.050 | ug/l | 91 | | 74-118 | | |
| Chrysene | N.D. | 0.010 | 0.050 | ug/l | 96 | | 75-112 | | |
| Dibenz(a,h)anthracene | N.D. | 0.010 | 0.050 | ug/l | 91 | | 66-122 | | |
| Fluoranthene | N.D. | 0.010 | 0.050 | ug/l | 97 | | 73-116 | | |
| Fluorene | N.D. | 0.010 | 0.050 | ug/l | 92 | | 74-115 | | |
| Indeno(1,2,3-cd)pyrene | N.D. | 0.010 | 0.050 | ug/l | 91 | | 66-122 | | |
| 1-Methylnaphthalene | N.D. | 0.010 | 0.050 | ug/l | 98 | | 72-114 | | |
| 2-Methylnaphthalene | N.D. | 0.010 | 0.050 | ug/l | 95 | | 74-119 | | |
| Naphthalene | N.D. | 0.030 | 0.050 | ug/l | 94 | | 67-118 | | |
| Phenanthrene | N.D. | 0.030 | 0.050 | ug/l | 93 | | 72-109 | | |
| Pyrene | N.D. | 0.010 | 0.050 | ug/l | 95 | | 71-116 | | |
| Batch number: 131661848003 | Sample number(s): 7094713-7094726 | | | | | | | | |
| Arsenic | N.D. | 0.0068 | 0.0200 | mg/l | 100 | | 90-113 | | |
| Barium | N.D. | 0.00033 | 0.0050 | mg/l | 99 | | 90-110 | | |
| Cadmium | N.D. | 0.00036 | 0.0050 | mg/l | 101 | | 90-112 | | |
| Calcium | 0.0974 J | 0.0640 | 0.200 | mg/l | 99 | | 90-110 | | |
| Chromium | N.D. | 0.0011 | 0.0150 | mg/l | 100 | | 90-110 | | |
| Lead | N.D. | 0.0051 | 0.0150 | mg/l | 100 | | 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 | 97 | | 80-120 | | |
| Silver | N.D. | 0.0012 | 0.0050 | mg/l | 102 | | 80-120 | | |
| Vanadium | N.D. | 0.0013 | 0.0050 | mg/l | 103 | | 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: 1397455
Reported: 06/23/13 at 06:46 PM

| Analysis Name | Blank Result | Blank MDL** | Blank LOQ | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 131675713002 | Sample number(s): 7094713-7094726 | | | | | | | | |
| Mercury | N.D. | 0.00007 0 | 0.00020 | mg/l | 100 | | 80-120 | | |

## 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: C131682AA | Sample number(s): 7094713-7094722,7094724-7094727 UNSPK: 7094720 | | | | | | | | |
| Acetone | 102 | 111 | 57-163 | 8 | 30 | | | | |
| Allyl Chloride | 96 | 98 | 67-139 | 2 | 30 | | | | |
| Benzene | 114 | 115 | 87-126 | 0 | 30 | | | | |
| Bromobenzene | 108 | 111 | 80-123 | 3 | 30 | | | | |
| Bromochloromethane | 118 | 117 | 82-125 | 1 | 30 | | | | |
| Bromodichloromethane | 115 | 114 | 82-133 | 1 | 30 | | | | |
| Bromoform | 121 | 122 | 60-138 | 1 | 30 | | | | |
| Bromomethane | 102 | 104 | 41-145 | 2 | 30 | | | | |
| 2-Butanone | 95 | 104 | 63-146 | 9 | 30 | | | | |
| n-Butylbenzene | 103 | 103 | 83-131 | 1 | 30 | | | | |
| sec-Butylbenzene | 106 | 108 | 84-128 | 2 | 30 | | | | |
| tert-Butylbenzene | 109 | 111 | 84-135 | 3 | 30 | | | | |
| Carbon Tetrachloride | 129 | 129 | 81-148 | 0 | 30 | | | | |
| Chlorobenzene | 119 | 119 | 78-133 | 0 | 30 | | | | |
| Chloroethane | 99 | 100 | 70-139 | 0 | 30 | | | | |
| Chloroform | 116 | 117 | 86-136 | 0 | 30 | | | | |
| Chloromethane | 90 | 91 | 55-152 | 2 | 30 | | | | |
| 2-Chlorotoluene | 108 | 110 | 81-120 | 2 | 30 | | | | |
| 4-Chlorotoluene | 112 | 111 | 82-119 | 0 | 30 | | | | |
| 1,2-Dibromo-3-chloropropane | 101 | 111 | 43-143 | 10 | 30 | | | | |
| Dibromochloromethane | 121 | 122 | 79-125 | 1 | 30 | | | | |
| 1,2-Dibromoethane | 111 | 113 | 84-127 | 2 | 30 | | | | |
| Dibromomethane | 114 | 114 | 83-126 | 0 | 30 | | | | |
| 1,2-Dichlorobenzene | 109 | 111 | 83-117 | 1 | 30 | | | | |
| 1,3-Dichlorobenzene | 109 | 110 | 81-118 | 1 | 30 | | | | |
| 1,4-Dichlorobenzene | 109 | 110 | 79-120 | 1 | 30 | | | | |
| Dichlorodifluoromethane | 88 | 90 | 28-136 | 2 | 30 | | | | |
| 1,1-Dichloroethane | 110 | 112 | 88-136 | 1 | 30 | | | | |
| 1,2-Dichloroethane | 111 | 114 | 82-135 | 3 | 30 | | | | |
| 1,1-Dichloroethene | 127 | 127 | 83-150 | 1 | 30 | | | | |
| cis-1,2-Dichloroethene | 116 | 117 | 82-129 | 1 | 30 | | | | |
| trans-1,2-Dichloroethene | 124 | 126 | 88-127 | 2 | 30 | | | | |
| Dichlorofluoromethane | 126 | 129 | 59-176 | 2 | 30 | | | | |
| 1,2-Dichloropropane | 114 | 116 | 91-126 | 1 | 30 | | | | |
| 1,3-Dichloropropane | 107 | 108 | 80-127 | 1 | 30 | | | | |
| 2,2-Dichloropropane | 115 | 118 | 80-134 | 3 | 30 | | | | |
| 1,1-Dichloropropene | 121 | 123 | 86-139 | 2 | 30 | | | | |
| cis-1,3-Dichloropropene | 101 | 106 | 74-132 | 4 | 30 | | | | |
| trans-1,3-Dichloropropene | 104 | 107 | 71-128 | 2 | 30 | | | | |
| Ethyl ether | 93 | 99 | 67-127 | 6 | 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 Group Number: 1397455
Reported: 06/23/13 at 06:46 PM

## 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 |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | 112 | 113 | 80-140 | 1 | 30 | | | | |
| Freon 113 | 127 | 128 | 87-158 | 1 | 30 | | | | |
| Hexachlorobutadiene | 102 | 103 | 65-128 | 1 | 30 | | | | |
| Isopropylbenzene | 112 | 114 | 81-133 | 1 | 30 | | | | |
| p-Isopropyltoluene | 106 | 107 | 84-124 | 1 | 30 | | | | |
| Methyl Tertiary Butyl Ether | 98 | 101 | 82-132 | 3 | 30 | | | | |
| 4-Methyl-2-Pentanone | 98 | 100 | 69-149 | 2 | 30 | | | | |
| Methylene Chloride | 116 | 118 | 84-122 | 1 | 30 | | | | |
| n-Propylbenzene | 106 | 107 | 79-131 | 1 | 30 | | | | |
| Styrene | 117 | 118 | 63-151 | 0 | 30 | | | | |
| 1,1,1,2-Tetrachloroethane | 119 | 118 | 87-126 | 1 | 30 | | | | |
| 1,1,2,2-Tetrachloroethane | 102 | 104 | 75-131 | 2 | 30 | | | | |
| Tetrachloroethene | 121 | 121 | 75-129 | 1 | 30 | | | | |
| Tetrahydrofuran | 97 | 104 | 56-154 | 7 | 30 | | | | |
| Toluene | 112 | 121 | 83-127 | 8 | 30 | | | | |
| 1,2,3-Trichlorobenzene | 84 | 85 | 73-125 | 1 | 30 | | | | |
| 1,2,4-Trichlorobenzene | 89 | 91 | 77-120 | 2 | 30 | | | | |
| 1,1,1-Trichloroethane | 119 | 123 | 85-140 | 3 | 30 | | | | |
| 1,1,2-Trichloroethane | 114 | 114 | 85-129 | 0 | 30 | | | | |
| Trichloroethene | 120 | 121 | 85-131 | 1 | 30 | | | | |
| Trichlorofluoromethane | 107 | 110 | 67-161 | 3 | 30 | | | | |
| 1,2,3-Trichloropropane | 106 | 110 | 76-120 | 4 | 30 | | | | |
| 1,2,4-Trimethylbenzene | 106 | 108 | 87-126 | 2 | 30 | | | | |
| 1,3,5-Trimethylbenzene | 108 | 110 | 89-129 | 2 | 30 | | | | |
| Vinyl Chloride | 96 | 100 | 65-151 | 3 | 30 | | | | |
| Xylene (Total) | 114 | 115 | 81-137 | 1 | 30 | | | | |
| Batch number: 13168WAD026 | Sample number(s): 7094713-7094722,7094724-7094726 UNSPK: 7094720 | | | | | | | | |
| Acenaphthene | 94 | 94 | 59-127 | 3 | 30 | | | | |
| Acenaphthylene | 103 | 102 | 33-146 | 3 | 30 | | | | |
| Anthracene | 96 | 93 | 69-119 | 1 | 30 | | | | |
| Benzo(a)anthracene | 79 | 74 | 67-124 | 3 | 30 | | | | |
| Benzo(a)pyrene | 70 | 63* | 64-123 | 6 | 30 | | | | |
| Benzo(b)fluoranthene | 63 | 57* | 61-133 | 7 | 30 | | | | |
| Benzo(g,h,i)perylene | 61 | 59 | 36-138 | 1 | 30 | | | | |
| Benzo(k)fluoranthene | 66 | 63 | 59-128 | 1 | 30 | | | | |
| Chrysene | 58* | 58* | 62-118 | 3 | 30 | | | | |
| Dibenz(a,h)anthracene | 64 | 66 | 32-141 | 6 | 30 | | | | |
| Fluoranthene | 82 | 68 | 65-123 | 11 | 30 | | | | |
| Fluorene | 97 | 97 | 69-124 | 4 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 64 | 62 | 29-143 | 1 | 30 | | | | |
| 1-Methylnaphthalene | 103 | 103 | 67-117 | 4 | 30 | | | | |
| 2-Methylnaphthalene | 100 | 100 | 71-126 | 4 | 30 | | | | |
| Naphthalene | 99 | 99 | 58-131 | 4 | 30 | | | | |
| Phenanthrene | 96 | 98 | 67-117 | 5 | 30 | | | | |
| Pyrene | 86 | 75 | 59-125 | 8 | 30 | | | | |
| Batch number: 131661848003 | Sample number(s): 7094713-7094726 UNSPK: 7094720 BKG: 7094720 | | | | | | | | |
| Arsenic | 104 | 103 | 81-123 | 1 | 20 | N.D. | N.D. | 0 (1) | 20 |
| Barium | 100 | 99 | 78-118 | 1 | 20 | 0.0582 | 0.0581 | 0 | 20 |
| Cadmium | 101 | 100 | 83-116 | 1 | 20 | 0.00039 J | 0.00045 J | 14 (1) | 20 |
| Calcium | 112 | 96 | 81-118 | 8 | 20 | 4.19 | 4.18 | 0 | 20 |

*- 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: 1397455
Reported: 06/23/13 at 06:46 PM

## 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 |
|---|---|---|---|---|---|---|---|---|---|
| Chromium | 102 | 100 | 81-120 | 1 | 20 | 0.0024 J | 0.0026 J | 6 (1) | 20 |
| Lead | 102 | 101 | 75-125 | 1 | 20 | 0.0057 J | 0.0058 J | 1 (1) | 20 |
| Magnesium | 109 | 99 | 75-125 | 5 | 20 | 1.99 | 1.96 | 2 | 20 |
| Nickel | 103 | 103 | 86-115 | 0 | 20 | 0.0027 J | 0.0028 J | 5 (1) | 20 |
| Selenium | 99 | 99 | 75-125 | 0 | 20 | N.D. | N.D. | 0 (1) | 20 |
| Silver | 104 | 105 | 75-125 | 1 | 20 | N.D. | N.D. | 0 (1) | 20 |
| Vanadium | 105 | 104 | 90-111 | 1 | 20 | 0.0047 J | 0.0051 | 8 (1) | 20 |
| Batch number: 131675713002 | Sample number(s): 7094713-7094726 UNSPK: 7094720 BKG: 7094720 | | | | | | | | |
| Mercury | 101 | 100 | 80-120 | 2 | 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: BTEX 25-ml purge
Batch number: C131682AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7094713 | 109 | 106 | 98 | 94 |
| 7094714 | 110 | 104 | 98 | 93 |
| 7094715 | 109 | 106 | 98 | 94 |
| 7094716 | 110 | 105 | 97 | 94 |
| 7094717 | 111 | 106 | 98 | 94 |
| 7094718 | 110 | 106 | 97 | 93 |
| 7094719 | 110 | 105 | 97 | 93 |
| 7094720 | 109 | 104 | 97 | 93 |
| 7094721 | 107 | 105 | 100 | 100 |
| 7094722 | 106 | 105 | 101 | 100 |
| 7094724 | 109 | 105 | 96 | 94 |
| 7094725 | 109 | 104 | 98 | 94 |
| 7094726 | 110 | 107 | 97 | 94 |
| 7094727 | 108 | 104 | 97 | 93 |
| Blank | 108 | 106 | 98 | 93 |
| LCS | 106 | 105 | 101 | 101 |
| MS | 107 | 105 | 100 | 100 |
| MSD | 106 | 105 | 101 | 100 |
| Limits: | 77-114 | 74-113 | 77-110 | 78-110 |

Analysis Name: PAHs in waters by SIM
Batch number: 13168WAD026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7094713 | 93 | 50* | 100 |
| 7094714 | 84 | 52* | 92 |
| 7094715 | 85 | 57* | 93 |

*- 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: 1397455
Reported: 06/23/13 at 06:46 PM

## Surrogate Quality Control

| | | | |
|---|---|---|---|
| 7094716 | 87 | 63 | 95 |
| 7094717 | 87 | 59* | 96 |
| 7094718 | 85 | 77 | 94 |
| 7094719 | 89 | 84 | 93 |
| 7094720 | 78 | 70 | 91 |
| 7094721 | 91 | 82 | 104 |
| 7094722 | 86 | 77 | 102 |
| 7094724 | 69 | 56* | 80 |
| 7094725 | 92 | 63 | 97 |
| 7094726 | 85 | 48* | 93 |
| Blank | 98 | 106 | 101 |
| LCS | 91 | 97 | 99 |
| MS | 91 | 82 | 104 |
| MSD | 86 | 77 | 102 |
| 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

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For Eurofins Lancaster Laboratories use only
Acct. # 14739 Group # 1397455 Sample # 709 4713-27
Instructions on reverse side correspond with circled numbers.

Pg. 1 of 2

**1 Client Information**

Facility #/SID: Mayflower Pipeline Incident
Site Address: Mayflower, AR
ExxonMobil PM: Scott Bushroe
Cost Center/AFE:
Consultant/Office: ARCADIS-US
Consultant PM: Steve Barrick
Consultant Phone #: 919-302-6799
Sampler: Tyler Milburn / Hans Von Aller

SCR#:

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

**5 Analyses Requested** — Preservation Code

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

**6 Remarks**
Data Analysis Questions: Lyndi Mott/ARCADIS

| 2 Sample Identification | Collected Date | Collected Time | 3 Grab | 3 Composite | Total # of Containers | VOCs 8260B (H) | PAH 8270 SIM (H) | RCRA Metals + Ni, V, Ca, Mg hardness (N) |
|---|---|---|---|---|---|---|---|---|
| WS-003(Surface)061413 | 6/14/13 | 0730 | ✓ | | 6 | ✓ | ✓ | ✓ |
| WS-002(Surface)061413 | | 0750 | ✓ | | 6 | ✓ | ✓ | ✓ |
| WS-005(Surface)061413 | | 0820 | ✓ | | 6 | ✓ | ✓ | ✓ |
| WS-001(Surface)061413 | | 0850 | ✓ | | 6 | ✓ | ✓ | ✓ |
| WS-001(0.5-1.0)061413 | | 0900 | ✓ | | 6 | ✓ | ✓ | ✓ |
| WS-004(Surface)061413 | | 0910 | ✓ | | 6 | ✓ | ✓ | ✓ |
| WS-004(0.5-1.0)061413 | | 0920 | ✓ | | 6 | ✓ | ✓ | ✓ |
| WS-007(Surface)061413 | | 0940 | ✓ | | 6 | ✓ | ✓ | ✓ |
| WS-007(Surface)061413 MS/MSD | | 0940 | ✓ | | 12 | ✓ | ✓ | ✓ |
| WS-006(0.5-1.0)061413 | | 0950 | ✓ | | 6 | ✓ | ✓ | ✓ |
| WS-006(Surface)061413 | | 1020 | ✓ | | 6 | ✓ | ✓ | ✓ |
| WS-006(0.5-1.0)061413 | | 1030 | ✓ | | 6 | ✓ | ✓ | ✓ |

Remarks: MS/MSD

**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 |
|---|---|---|---|---|---|
| Lyndi Mills | 6/14/13 | 1300 | | | |
| | | | | | |
| | | | | | |

**9**

Relinquished by Commercial Carrier: UPS ___ FedEx ✓ Other ___

Received by: [signature] Date 6/15/13 Time 0930

Temperature Upon Receipt 1.2-1.4 °C

Custody Seals Intact? (Yes) No

# ExxonMobil Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories use only
Acct. # 14739 Group # 1397455 Sample # 789 4713-27

Instructions on reverse side correspond with circled numbers.

Pg. 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-US
Consultant PM: Steve Bonnick
Consultant Phone #: 919-302-6799
Sampler: Tyler Milburn / Hans Van Aller

SCR#:

| 2 Sample Identification | Collected Date | Collected Time | 3 Grab | Composite | 4 Matrix: Soil | Sediment | Water: Ground | Water: Potable | Water: Surface | Water: NPDES | Air | Oil | Total # of Containers | 5 Analyses Requested / Preservation Code: H | VOCs 8260B |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WS-TB-73-061413 | 6/14/13 | — | ✓ | | | | ✓ | | | | | | 2 | ✓ | ✓ |

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

**6 Remarks**
Data Analysis Questions: Lyndi Mott/ARCADIS

**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 |
|---|---|---|---|---|---|
| [signature] | 6/14/13 | 1300 | | | |
| | | | | | |
| | | | | | |
| Relinquished by Commercial Carrier: UPS ___ FedEx ✓ Other ___ | | | [signature] | 6/15/13 | 0930 |

Temperature Upon Receipt 1.2-1.4 °C

Custody Seals Intact? (Yes) No

9

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G-1397455

# Environmental Sample Administration Receipt Documentation Log

**Client/Project:** ExxonMobil

**Date of Receipt:** 6/15/13

**Time of Receipt:** 0930

**Source Code:** 50

**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 | DT131 | 1.2 | TB | WI | Y | B | SW |
| 2 | ↓ | 1.4 | ↓ | ↓ | ↓ | ↓ | SW |
| 3 | ↓ | 0.6 | ↓ | ↓ | ↓ | ↓ | SO |
| 4 | ↓ | 1.8 | ↓ | ↓ | ↓ | ↓ | SO |
| 5 | ↓ | 1.0 | ↓ | ↓ | ↓ | ↓ | QD |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** Ø

**Paperwork Discrepancy/Unpacking Problems:**

Gr.1397456/vial -015D(1.5-2.0) labeled -015D(1.0-1.5) labeled by time
Gr.1397456/vial -016C(1.0-1.5)MS (moist vial) not ID'd def'd by process of elimination.

**Unpacker Signature/Emp#:** [signature] 964 **Date/Time:** 6/15/13 1015

Issued by Dept. 6042 Management

2174.06

# Explanation of Symbols and Abbreviations

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

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

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

**>** greater than

**J** estimated value – The result is ≥ 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 ≥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.