

## ANALYTICAL RESULTS

Prepared by:

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2425 New Holland Pike  
Lancaster, PA 17601

Prepared for:

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

October 17, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 10/10/2013

Group Number: 1425288

SDG: PEM05

PO Number: B0086003.1301

State of Sample Origin: AR

Client Sample DescriptionLancaster Labs (LL) #

|                                             |         |
|---------------------------------------------|---------|
| WS-014(1.5-2.0)100913 Grab Surface Water    | 7231420 |
| WS-014(5.5-6.0)100913 Grab Surface Water    | 7231421 |
| WS-012(1.5-2.0)100913 Grab Surface Water    | 7231422 |
| WS-012(5.0-5.5)100913 Grab Surface Water    | 7231423 |
| WS-010(1.5-2.0)100913 Grab Surface Water    | 7231424 |
| WS-010(3.5-4.0)100913 Grab Surface Water    | 7231425 |
| WS-006(0.5-1.0)100913 Grab Surface Water    | 7231426 |
| WS-006(0.5-1.0)100913MS Grab Surface Water  | 7231427 |
| WS-006(0.5-1.0)100913MSD Grab Surface Water | 7231428 |
| WS-006(0.5-1.0)100913DUP Grab Surface Water | 7231429 |
| WS-005(Surface)100913 Grab Surface Water    | 7231430 |
| WS-011(1.5-2.0)100913 Grab Surface Water    | 7231431 |
| WS-011(5.0-5.5)100913 Grab Surface Water    | 7231432 |
| WS-002(Surface)100913 Grab Surface Water    | 7231433 |
| WS-018(Surface)100913 Grab Surface Water    | 7231434 |
| WS-003(Surface)100913 Grab Surface Water    | 7231435 |
| WS-007(0.5-1.0)100913 Grab Surface Water    | 7231436 |
| WS-001(0.5-1.0)100913 Grab Surface Water    | 7231437 |
| WS-EB-86-100913 Grab Water                  | 7231438 |

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

ELECTRONIC     ARCADIS

COPY TO

Attn: Stephen Barrick

ELECTRONIC     ARCADIS

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Attn: Lyndi Mott

ELECTRONIC     ExxonMobil

Attn: Michael J. Firth

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Respectfully Submitted,



Katherine A. Klinefelter  
Principal Specialist

(717) 556-7256

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Project Name: Mayflower, AR Pipeline Incident  
LLI Group #: 1425288

**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 #: 13283WAN026 (Sample number(s): 7231420-7231428, 7231430-7231438 UNSPK: 7231426)

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

**EPA 1664A, Wet Chemistry**

Batch #: 13289807903A (Sample number(s): 7231420-7231437 UNSPK: 7231426 BKG: 7231426)

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

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

**Sample Description:** WS-014(1.5-2.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231420  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 08:30 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91415 SDG#: PEM05-01

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

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

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Collected: 10/09/2013 08:30 by RL

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630 Plaza Drive, Suite 600  
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Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91415 SDG#: PEM05-01

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 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               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 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               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 24.4               | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | N.D.               | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | 0.0435             | 0.00033                             | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | N.D.               | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 5.39               | 0.0334                              | 0.200                             | 1               |

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

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Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231420  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 08:30 by RL

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630 Plaza Drive, Suite 600  
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Submitted: 10/10/2013 09:50

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91415 SDG#: PEM05-01

| CAT No.              | Analysis Name      | CAS Number          | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>SW-846 6010B</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07051                | Chromium           | 7440-47-3           | 0.0025 J           | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead               | 7439-92-1           | N.D.               | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium          | 7439-95-4           | 2.66               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel             | 7440-02-0           | 0.0020 J           | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium           | 7782-49-2           | N.D.               | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver             | 7440-22-4           | N.D.               | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium           | 7440-62-2           | N.D.               | 0.0020                              | 0.0050                            | 1               |
|                      |                    | <b>SW-846 7470A</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury            | 7439-97-6           | N.D.               | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>EPA 1664A</b>    | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease) | n.a.                | 3.3 J              | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/11/2013 23:27       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/11/2013 23:27       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 06:47       | Brian K Graham       | 1               |
| 10470   | BNA Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:47       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:47       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:47       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:47       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:47       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:47       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:47       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:47       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:47       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:47       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:47       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 09:15       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)             | EPA 1664A               | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

**Sample Description:** WS-014(5.5-6.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231421  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 08:40 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91455 SDG#: PEM05-02

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

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

**Sample Description:** WS-014(5.5-6.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231421  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 08:40 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91455 SDG#: PEM05-02

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 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               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 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               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 24.4               | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | N.D.               | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | 0.0436             | 0.00033                             | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | N.D.               | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 5.36               | 0.0334                              | 0.200                             | 1               |

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

**Sample Description:** WS-014(5.5-6.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231421  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 08:40 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91455 SDG#: PEM05-02

| CAT No.              | Analysis Name      | CAS Number          | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>SW-846 6010B</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07051                | Chromium           | 7440-47-3           | N.D.               | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead               | 7439-92-1           | N.D.               | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium          | 7439-95-4           | 2.67               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel             | 7440-02-0           | N.D.               | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium           | 7782-49-2           | N.D.               | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver             | 7440-22-4           | N.D.               | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium           | 7440-62-2           | N.D.               | 0.0020                              | 0.0050                            | 1               |
|                      |                    | <b>SW-846 7470A</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury            | 7439-97-6           | N.D.               | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>EPA 1664A</b>    | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease) | n.a.                | 1.6 J              | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/11/2013 23:48       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/11/2013 23:48       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 07:14       | Brian K Graham       | 1               |
| 10470   | BNA Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:51       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:51       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:51       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:51       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:51       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:51       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:51       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:51       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:51       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:51       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:51       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 09:17       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)             | EPA 1664A               | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

**Sample Description:** WS-012(1.5-2.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231422  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 08:55 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91215 SDG#: PEM05-03

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

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

**Sample Description:** WS-012(1.5-2.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231422  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 08:55 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91215 SDG#: PEM05-03

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 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               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 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               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 25.6               | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | N.D.               | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | 0.0378             | 0.00033                             | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | N.D.               | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 5.71               | 0.0334                              | 0.200                             | 1               |

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

**Sample Description:** WS-012(1.5-2.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231422  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 08:55 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91215 SDG#: PEM05-03

| CAT No.              | Analysis Name      | CAS Number          | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>SW-846 6010B</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07051                | Chromium           | 7440-47-3           | N.D.               | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead               | 7439-92-1           | N.D.               | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium          | 7439-95-4           | 2.75               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel             | 7440-02-0           | N.D.               | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium           | 7782-49-2           | N.D.               | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver             | 7440-22-4           | N.D.               | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium           | 7440-62-2           | N.D.               | 0.0020                              | 0.0050                            | 1               |
|                      |                    | <b>SW-846 7470A</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury            | 7439-97-6           | N.D.               | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>EPA 1664A</b>    | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease) | n.a.                | 1.7 J              | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/12/2013 00:09       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/12/2013 00:09       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 07:42       | Brian K Graham       | 1               |
| 10470   | BNA Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:03       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:03       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:03       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:03       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:03       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:03       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:03       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:03       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:03       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:03       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:03       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 09:23       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)             | EPA 1664A               | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

**Sample Description:** WS-012(5.0-5.5)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231423  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:05 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91250 SDG#: PEM05-04

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

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

**Sample Description:** WS-012(5.0-5.5)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231423  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:05 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91250 SDG#: PEM05-04

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 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               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 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               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 26.6               | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | N.D.               | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | 0.0404             | 0.00033                             | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | N.D.               | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 5.95               | 0.0334                              | 0.200                             | 1               |

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

**Sample Description:** WS-012(5.0-5.5)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231423  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:05 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91250 SDG#: PEM05-04

| CAT No.              | Analysis Name      | CAS Number          | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>SW-846 6010B</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07051                | Chromium           | 7440-47-3           | N.D.               | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead               | 7439-92-1           | N.D.               | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium          | 7439-95-4           | 2.86               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel             | 7440-02-0           | N.D.               | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium           | 7782-49-2           | N.D.               | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver             | 7440-22-4           | N.D.               | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium           | 7440-62-2           | N.D.               | 0.0020                              | 0.0050                            | 1               |
|                      |                    | <b>SW-846 7470A</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury            | 7439-97-6           | N.D.               | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>EPA 1664A</b>    | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease) | n.a.                | 1.5 J              | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/12/2013 00:30       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/12/2013 00:30       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 08:09       | Brian K Graham       | 1               |
| 10470   | BNA Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:07       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:07       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:07       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:07       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:07       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:07       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:07       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:07       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:07       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:07       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:07       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 09:25       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)             | EPA 1664A               | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

**Sample Description:** WS-010(1.5-2.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231424  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:40 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91015 SDG#: PEM05-05

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

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

**Sample Description:** WS-010(1.5-2.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231424  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:40 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91015 SDG#: PEM05-05

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 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               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 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               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 26.8               | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | N.D.               | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | 0.0389             | 0.00033                             | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | N.D.               | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 5.97               | 0.0334                              | 0.200                             | 1               |

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

**Sample Description:** WS-010(1.5-2.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231424  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:40 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91015 SDG#: PEM05-05

| CAT No.              | Analysis Name      | CAS Number          | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>SW-846 6010B</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07051                | Chromium           | 7440-47-3           | N.D.               | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead               | 7439-92-1           | N.D.               | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium          | 7439-95-4           | 2.89               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel             | 7440-02-0           | N.D.               | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium           | 7782-49-2           | N.D.               | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver             | 7440-22-4           | N.D.               | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium           | 7440-62-2           | N.D.               | 0.0020                              | 0.0050                            | 1               |
|                      |                    | <b>SW-846 7470A</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury            | 7439-97-6           | N.D.               | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>EPA 1664A</b>    | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease) | n.a.                | N.D.               | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/12/2013 00:51       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/12/2013 00:51       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 08:37       | Brian K Graham       | 1               |
| 10470   | BNA Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:11       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:11       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:11       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:11       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:11       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:11       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:11       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:11       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:11       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:11       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:11       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 09:28       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)             | EPA 1664A               | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

**Sample Description:** WS-010(3.5-4.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231425  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:50 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91035 SDG#: PEM05-06

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

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

**Sample Description:** WS-010(3.5-4.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231425  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:50 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91035 SDG#: PEM05-06

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 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               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 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               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 27.3               | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | 0.0074 J           | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | 0.0419             | 0.00033                             | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | N.D.               | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 6.09               | 0.0334                              | 0.200                             | 1               |

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

**Sample Description:** WS-010(3.5-4.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231425  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:50 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91035 SDG#: PEM05-06

| CAT No.              | Analysis Name      | CAS Number          | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>SW-846 6010B</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07051                | Chromium           | 7440-47-3           | N.D.               | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead               | 7439-92-1           | N.D.               | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium          | 7439-95-4           | 2.94               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel             | 7440-02-0           | N.D.               | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium           | 7782-49-2           | N.D.               | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver             | 7440-22-4           | N.D.               | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium           | 7440-62-2           | N.D.               | 0.0020                              | 0.0050                            | 1               |
|                      |                    | <b>SW-846 7470A</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury            | 7439-97-6           | N.D.               | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>EPA 1664A</b>    | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease) | n.a.                | N.D.               | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/12/2013 01:12       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/12/2013 01:12       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 09:04       | Brian K Graham       | 1               |
| 10470   | BNA Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:15       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:15       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:15       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:15       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:15       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:15       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:15       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:15       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:15       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:15       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:15       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 09:30       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)             | EPA 1664A               | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

**Sample Description:** WS-006(0.5-1.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231426  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:20 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

90605 SDG#: PEM05-07BKG

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

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

**Sample Description:** WS-006(0.5-1.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231426  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:20 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

90605 SDG#: PEM05-07BKG

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 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               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 08357         | Acenaphthene              | 83-32-9                  | N.D.               | 0.010                               | 0.051                             | 1               |
| 08357         | Acenaphthylene            | 208-96-8                 | N.D.               | 0.010                               | 0.051                             | 1               |
| 08357         | Anthracene                | 120-12-7                 | N.D.               | 0.010                               | 0.051                             | 1               |
| 08357         | Benzo(a)anthracene        | 56-55-3                  | N.D.               | 0.010                               | 0.051                             | 1               |
| 08357         | Benzo(a)pyrene            | 50-32-8                  | N.D.               | 0.010                               | 0.051                             | 1               |
| 08357         | Benzo(b)fluoranthene      | 205-99-2                 | N.D.               | 0.010                               | 0.051                             | 1               |
| 08357         | Benzo(g,h,i)perylene      | 191-24-2                 | N.D.               | 0.010                               | 0.051                             | 1               |
| 08357         | Benzo(k)fluoranthene      | 207-08-9                 | N.D.               | 0.010                               | 0.051                             | 1               |
| 08357         | Chrysene                  | 218-01-9                 | N.D.               | 0.010                               | 0.051                             | 1               |
| 08357         | Dibenz(a,h)anthracene     | 53-70-3                  | N.D.               | 0.010                               | 0.051                             | 1               |
| 08357         | Fluoranthene              | 206-44-0                 | N.D.               | 0.010                               | 0.051                             | 1               |
| 08357         | Fluorene                  | 86-73-7                  | N.D.               | 0.010                               | 0.051                             | 1               |
| 08357         | Indeno(1,2,3-cd)pyrene    | 193-39-5                 | N.D.               | 0.010                               | 0.051                             | 1               |
| 08357         | 1-Methylnaphthalene       | 90-12-0                  | N.D.               | 0.010                               | 0.051                             | 1               |
| 08357         | 2-Methylnaphthalene       | 91-57-6                  | N.D.               | 0.010                               | 0.051                             | 1               |
| 08357         | Naphthalene               | 91-20-3                  | N.D.               | 0.031                               | 0.051                             | 1               |
| 08357         | Phenanthrene              | 85-01-8                  | N.D.               | 0.031                               | 0.051                             | 1               |
| 08357         | Pyrene                    | 129-00-0                 | N.D.               | 0.010                               | 0.051                             | 1               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 26.7               | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | N.D.               | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | 0.0376             | 0.00033                             | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | N.D.               | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 5.97               | 0.0334                              | 0.200                             | 1               |

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

**Sample Description:** WS-006(0.5-1.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231426  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:20 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

90605 SDG#: PEM05-07BKG

| CAT No.              | Analysis Name      | CAS Number          | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>SW-846 6010B</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07051                | Chromium           | 7440-47-3           | N.D.               | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead               | 7439-92-1           | N.D.               | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium          | 7439-95-4           | 2.87               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel             | 7440-02-0           | N.D.               | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium           | 7782-49-2           | N.D.               | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver             | 7440-22-4           | N.D.               | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium           | 7440-62-2           | N.D.               | 0.0020                              | 0.0050                            | 1               |
|                      |                    | <b>SW-846 7470A</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury            | 7439-97-6           | N.D.               | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>EPA 1664A</b>    | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease) | n.a.                | N.D.               | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/12/2013 01:33       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/12/2013 01:33       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 05:25       | Brian K Graham       | 1               |
| 10470   | BNA Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 10:02       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 10:02       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 10:02       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 10:02       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 10:02       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 10:02       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 10:02       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 10:02       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 10:02       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 10:02       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 10:02       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 09:32       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)             | EPA 1664A               | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

**Sample Description:** WS-006(0.5-1.0)100913MS Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231427  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:20 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

90605 SDG#: PEM05-07MS

| CAT No. | Analysis Name               | CAS Number        | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------|-----------------------------|-------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| GC/MS   | Volatiles                   | SW-846 8260B 25mL | ug/l               | ug/l                                | ug/l                              |                 |
|         | purge                       |                   |                    |                                     |                                   |                 |
| 02898   | Acetone                     | 67-64-1           | 41                 | 3.0                                 | 5.0                               | 1               |
| 02898   | Allyl Chloride              | 107-05-1          | 4.7                | 0.1                                 | 0.5                               | 1               |
| 02898   | Benzene                     | 71-43-2           | 5.3                | 0.1                                 | 0.5                               | 1               |
| 02898   | Bromobenzene                | 108-86-1          | 4.9                | 0.1                                 | 0.5                               | 1               |
| 02898   | Bromochloromethane          | 74-97-5           | 4.9                | 0.1                                 | 0.5                               | 1               |
| 02898   | Bromodichloromethane        | 75-27-4           | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | Bromoform                   | 75-25-2           | 4.5                | 0.1                                 | 0.5                               | 1               |
| 02898   | Bromomethane                | 74-83-9           | 4.1                | 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          | 5.1                | 0.1                                 | 0.5                               | 1               |
| 02898   | tert-Butylbenzene           | 98-06-6           | 5.1                | 0.1                                 | 0.5                               | 1               |
| 02898   | Carbon Tetrachloride        | 56-23-5           | 5.3                | 0.1                                 | 0.5                               | 1               |
| 02898   | Chlorobenzene               | 108-90-7          | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | Chloroethane                | 75-00-3           | 4.3                | 0.1                                 | 0.5                               | 1               |
| 02898   | Chloroform                  | 67-66-3           | 5.3                | 0.1                                 | 0.5                               | 1               |
| 02898   | Chloromethane               | 74-87-3           | 4.1                | 0.2                                 | 0.5                               | 1               |
| 02898   | 2-Chlorotoluene             | 95-49-8           | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | 4-Chlorotoluene             | 106-43-4          | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,2-Dibromo-3-chloropropane | 96-12-8           | 4.6                | 0.2                                 | 0.5                               | 1               |
| 02898   | Dibromochloromethane        | 124-48-1          | 4.7                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,2-Dibromoethane           | 106-93-4          | 4.9                | 0.1                                 | 0.5                               | 1               |
| 02898   | Dibromomethane              | 74-95-3           | 5.2                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,2-Dichlorobenzene         | 95-50-1           | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,3-Dichlorobenzene         | 541-73-1          | 5.1                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,4-Dichlorobenzene         | 106-46-7          | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | Dichlorodifluoromethane     | 75-71-8           | 3.5                | 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          | 5.2                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,1-Dichloroethene          | 75-35-4           | 5.5                | 0.1                                 | 0.5                               | 1               |
| 02898   | cis-1,2-Dichloroethene      | 156-59-2          | 5.1                | 0.1                                 | 0.5                               | 1               |
| 02898   | trans-1,2-Dichloroethene    | 156-60-5          | 5.3                | 0.1                                 | 0.5                               | 1               |
| 02898   | Dichlorofluoromethane       | 75-43-4           | 4.5                | 0.2                                 | 0.5                               | 1               |
| 02898   | 1,2-Dichloropropane         | 78-87-5           | 5.5                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,3-Dichloropropane         | 142-28-9          | 5.1                | 0.1                                 | 0.5                               | 1               |
| 02898   | 2,2-Dichloropropane         | 594-20-7          | 5.1                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,1-Dichloropropene         | 563-58-6          | 5.3                | 0.1                                 | 0.5                               | 1               |
| 02898   | cis-1,3-Dichloropropene     | 10061-01-5        | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | trans-1,3-Dichloropropene   | 10061-02-6        | 4.6                | 0.1                                 | 0.5                               | 1               |
| 02898   | Ethyl ether                 | 60-29-7           | 4.8                | 0.1                                 | 0.5                               | 1               |
| 02898   | Ethylbenzene                | 100-41-4          | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | Freon 113                   | 76-13-1           | 5.3                | 0.2                                 | 0.5                               | 1               |
| 02898   | Hexachlorobutadiene         | 87-68-3           | 4.9                | 0.1                                 | 0.5                               | 1               |
| 02898   | Isopropylbenzene            | 98-82-8           | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | p-Isopropyltoluene          | 99-87-6           | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | Methyl Tertiary Butyl Ether | 1634-04-4         | 4.7                | 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           | 5.4                | 0.2                                 | 0.5                               | 1               |

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

**Sample Description:** WS-006(0.5-1.0)100913MS Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231427  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:20 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

90605 SDG#: PEM05-07MS

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 02898         | n-Propylbenzene           | 103-65-1                 | 5.2                | 0.1                                 | 0.5                               | 1               |
| 02898         | Styrene                   | 100-42-5                 | 4.9                | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,1,1,2-Tetrachloroethane | 630-20-6                 | 4.9                | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,1,2,2-Tetrachloroethane | 79-34-5                  | 5.2                | 0.1                                 | 0.5                               | 1               |
| 02898         | Tetrachloroethene         | 127-18-4                 | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898         | Tetrahydrofuran           | 109-99-9                 | 22                 | 2.0                                 | 5.0                               | 1               |
| 02898         | Toluene                   | 108-88-3                 | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,2,3-Trichlorobenzene    | 87-61-6                  | 4.8                | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,2,4-Trichlorobenzene    | 120-82-1                 | 4.8                | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,1,1-Trichloroethane     | 71-55-6                  | 5.2                | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,1,2-Trichloroethane     | 79-00-5                  | 5.1                | 0.1                                 | 0.5                               | 1               |
| 02898         | Trichloroethene           | 79-01-6                  | 5.3                | 0.1                                 | 0.5                               | 1               |
| 02898         | Trichlorofluoromethane    | 75-69-4                  | 4.7                | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,2,3-Trichloropropane    | 96-18-4                  | 5.1                | 0.3                                 | 1.0                               | 1               |
| 02898         | 1,2,4-Trimethylbenzene    | 95-63-6                  | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,3,5-Trimethylbenzene    | 108-67-8                 | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898         | Vinyl Chloride            | 75-01-4                  | 4.3                | 0.1                                 | 0.5                               | 1               |
| 02898         | Xylene (Total)            | 1330-20-7                | 15                 | 0.1                                 | 0.5                               | 1               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 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                 | 0.49               | 0.010                               | 0.051                             | 1               |
| 08357         | Benzo(a)anthracene        | 56-55-3                  | 0.96               | 0.010                               | 0.051                             | 1               |
| 08357         | Benzo(a)pyrene            | 50-32-8                  | 0.48               | 0.010                               | 0.051                             | 1               |
| 08357         | Benzo(b)fluoranthene      | 205-99-2                 | 1.1                | 0.010                               | 0.051                             | 1               |
| 08357         | Benzo(g,h,i)perylene      | 191-24-2                 | 0.72               | 0.010                               | 0.051                             | 1               |
| 08357         | Benzo(k)fluoranthene      | 207-08-9                 | 0.78               | 0.010                               | 0.051                             | 1               |
| 08357         | Chrysene                  | 218-01-9                 | 0.88               | 0.010                               | 0.051                             | 1               |
| 08357         | Dibenz(a,h)anthracene     | 53-70-3                  | 0.82               | 0.010                               | 0.051                             | 1               |
| 08357         | Fluoranthene              | 206-44-0                 | 1.0                | 0.010                               | 0.051                             | 1               |
| 08357         | Fluorene                  | 86-73-7                  | 1.1                | 0.010                               | 0.051                             | 1               |
| 08357         | Indeno(1,2,3-cd)pyrene    | 193-39-5                 | 0.76               | 0.010                               | 0.051                             | 1               |
| 08357         | 1-Methylnaphthalene       | 90-12-0                  | 1.1                | 0.010                               | 0.051                             | 1               |
| 08357         | 2-Methylnaphthalene       | 91-57-6                  | 1.1                | 0.010                               | 0.051                             | 1               |
| 08357         | Naphthalene               | 91-20-3                  | 1.1                | 0.030                               | 0.051                             | 1               |
| 08357         | Phenanthrene              | 85-01-8                  | 1.0                | 0.030                               | 0.051                             | 1               |
| 08357         | Pyrene                    | 129-00-0                 | 0.84               | 0.010                               | 0.051                             | 1               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 45.0               | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | 0.155              | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | 2.07               | 0.00033                             | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | 0.0515             | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 9.98               | 0.0334                              | 0.200                             | 1               |

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

**Sample Description:** WS-006(0.5-1.0)100913MS Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231427  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:20 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

90605 SDG#: PEM05-07MS

| CAT No.              | Analysis Name      | CAS Number          | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>SW-846 6010B</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07051                | Chromium           | 7440-47-3           | 0.206              | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead               | 7439-92-1           | 0.160              | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium          | 7439-95-4           | 4.88               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel             | 7440-02-0           | 0.523              | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium           | 7782-49-2           | 0.159              | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver             | 7440-22-4           | 0.0458             | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium           | 7440-62-2           | 0.519              | 0.0020                              | 0.0050                            | 1               |
|                      |                    | <b>SW-846 7470A</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury            | 7439-97-6           | 0.0011             | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>EPA 1664A</b>    | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease) | n.a.                | 15.5               | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/12/2013 01:54       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/12/2013 01:54       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 05:52       | Brian K Graham       | 1               |
| 10470   | BNA Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:35       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:35       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:35       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:35       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:35       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:35       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:35       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:35       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:35       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:35       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:35       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 09:36       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)             | EPA 1664A               | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

**Sample Description:** WS-006(0.5-1.0)100913MSD Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231428  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:20 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

90605 SDG#: PEM05-07MSD

| CAT No. | Analysis Name               | CAS Number        | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------|-----------------------------|-------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| GC/MS   | Volatiles                   | SW-846 8260B 25mL | ug/l               | ug/l                                | ug/l                              |                 |
|         | purge                       |                   |                    |                                     |                                   |                 |
| 02898   | Acetone                     | 67-64-1           | 37                 | 3.0                                 | 5.0                               | 1               |
| 02898   | Allyl Chloride              | 107-05-1          | 4.8                | 0.1                                 | 0.5                               | 1               |
| 02898   | Benzene                     | 71-43-2           | 5.3                | 0.1                                 | 0.5                               | 1               |
| 02898   | Bromobenzene                | 108-86-1          | 4.9                | 0.1                                 | 0.5                               | 1               |
| 02898   | Bromochloromethane          | 74-97-5           | 4.9                | 0.1                                 | 0.5                               | 1               |
| 02898   | Bromodichloromethane        | 75-27-4           | 4.9                | 0.1                                 | 0.5                               | 1               |
| 02898   | Bromoform                   | 75-25-2           | 4.4                | 0.1                                 | 0.5                               | 1               |
| 02898   | Bromomethane                | 74-83-9           | 4.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | 2-Butanone                  | 78-93-3           | 34                 | 1.0                                 | 5.0                               | 1               |
| 02898   | n-Butylbenzene              | 104-51-8          | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | sec-Butylbenzene            | 135-98-8          | 5.1                | 0.1                                 | 0.5                               | 1               |
| 02898   | tert-Butylbenzene           | 98-06-6           | 5.1                | 0.1                                 | 0.5                               | 1               |
| 02898   | Carbon Tetrachloride        | 56-23-5           | 5.2                | 0.1                                 | 0.5                               | 1               |
| 02898   | Chlorobenzene               | 108-90-7          | 4.9                | 0.1                                 | 0.5                               | 1               |
| 02898   | Chloroethane                | 75-00-3           | 4.3                | 0.1                                 | 0.5                               | 1               |
| 02898   | Chloroform                  | 67-66-3           | 5.2                | 0.1                                 | 0.5                               | 1               |
| 02898   | Chloromethane               | 74-87-3           | 4.0                | 0.2                                 | 0.5                               | 1               |
| 02898   | 2-Chlorotoluene             | 95-49-8           | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | 4-Chlorotoluene             | 106-43-4          | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,2-Dibromo-3-chloropropane | 96-12-8           | 4.4                | 0.2                                 | 0.5                               | 1               |
| 02898   | Dibromochloromethane        | 124-48-1          | 4.6                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,2-Dibromoethane           | 106-93-4          | 4.9                | 0.1                                 | 0.5                               | 1               |
| 02898   | Dibromomethane              | 74-95-3           | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,2-Dichlorobenzene         | 95-50-1           | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,3-Dichlorobenzene         | 541-73-1          | 5.1                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,4-Dichlorobenzene         | 106-46-7          | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | Dichlorodifluoromethane     | 75-71-8           | 3.4                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,1-Dichloroethane          | 75-34-3           | 5.4                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,2-Dichloroethane          | 107-06-2          | 5.1                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,1-Dichloroethene          | 75-35-4           | 5.5                | 0.1                                 | 0.5                               | 1               |
| 02898   | cis-1,2-Dichloroethene      | 156-59-2          | 5.1                | 0.1                                 | 0.5                               | 1               |
| 02898   | trans-1,2-Dichloroethene    | 156-60-5          | 5.2                | 0.1                                 | 0.5                               | 1               |
| 02898   | Dichlorofluoromethane       | 75-43-4           | 4.4                | 0.2                                 | 0.5                               | 1               |
| 02898   | 1,2-Dichloropropane         | 78-87-5           | 5.4                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,3-Dichloropropane         | 142-28-9          | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | 2,2-Dichloropropane         | 594-20-7          | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | 1,1-Dichloropropene         | 563-58-6          | 5.2                | 0.1                                 | 0.5                               | 1               |
| 02898   | cis-1,3-Dichloropropene     | 10061-01-5        | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | trans-1,3-Dichloropropene   | 10061-02-6        | 4.6                | 0.1                                 | 0.5                               | 1               |
| 02898   | Ethyl ether                 | 60-29-7           | 4.7                | 0.1                                 | 0.5                               | 1               |
| 02898   | Ethylbenzene                | 100-41-4          | 4.9                | 0.1                                 | 0.5                               | 1               |
| 02898   | Freon 113                   | 76-13-1           | 5.2                | 0.2                                 | 0.5                               | 1               |
| 02898   | Hexachlorobutadiene         | 87-68-3           | 4.9                | 0.1                                 | 0.5                               | 1               |
| 02898   | Isopropylbenzene            | 98-82-8           | 4.9                | 0.1                                 | 0.5                               | 1               |
| 02898   | p-Isopropyltoluene          | 99-87-6           | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898   | Methyl Tertiary Butyl Ether | 1634-04-4         | 4.7                | 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           | 5.3                | 0.2                                 | 0.5                               | 1               |

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

**Sample Description:** WS-006(0.5-1.0)100913MSD Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231428  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:20 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

90605 SDG#: PEM05-07MSD

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 02898         | n-Propylbenzene           | 103-65-1                 | 5.2                | 0.1                                 | 0.5                               | 1               |
| 02898         | Styrene                   | 100-42-5                 | 4.8                | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,1,1,2-Tetrachloroethane | 630-20-6                 | 4.8                | 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                 | 4.9                | 0.1                                 | 0.5                               | 1               |
| 02898         | Tetrahydrofuran           | 109-99-9                 | 22                 | 2.0                                 | 5.0                               | 1               |
| 02898         | Toluene                   | 108-88-3                 | 4.9                | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,2,3-Trichlorobenzene    | 87-61-6                  | 4.9                | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,2,4-Trichlorobenzene    | 120-82-1                 | 4.8                | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,1,1-Trichloroethane     | 71-55-6                  | 5.1                | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,1,2-Trichloroethane     | 79-00-5                  | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898         | Trichloroethene           | 79-01-6                  | 5.2                | 0.1                                 | 0.5                               | 1               |
| 02898         | Trichlorofluoromethane    | 75-69-4                  | 4.7                | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,2,3-Trichloropropane    | 96-18-4                  | 5.0                | 0.3                                 | 1.0                               | 1               |
| 02898         | 1,2,4-Trimethylbenzene    | 95-63-6                  | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,3,5-Trimethylbenzene    | 108-67-8                 | 5.0                | 0.1                                 | 0.5                               | 1               |
| 02898         | Vinyl Chloride            | 75-01-4                  | 4.2                | 0.1                                 | 0.5                               | 1               |
| 02898         | Xylene (Total)            | 1330-20-7                | 15                 | 0.1                                 | 0.5                               | 1               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 08357         | Acenaphthene              | 83-32-9                  | 0.94               | 0.010                               | 0.051                             | 1               |
| 08357         | Acenaphthylene            | 208-96-8                 | 1.1                | 0.010                               | 0.051                             | 1               |
| 08357         | Anthracene                | 120-12-7                 | 0.50               | 0.010                               | 0.051                             | 1               |
| 08357         | Benzo(a)anthracene        | 56-55-3                  | 1.0                | 0.010                               | 0.051                             | 1               |
| 08357         | Benzo(a)pyrene            | 50-32-8                  | 0.54               | 0.010                               | 0.051                             | 1               |
| 08357         | Benzo(b)fluoranthene      | 205-99-2                 | 1.1                | 0.010                               | 0.051                             | 1               |
| 08357         | Benzo(g,h,i)perylene      | 191-24-2                 | 0.80               | 0.010                               | 0.051                             | 1               |
| 08357         | Benzo(k)fluoranthene      | 207-08-9                 | 0.81               | 0.010                               | 0.051                             | 1               |
| 08357         | Chrysene                  | 218-01-9                 | 0.87               | 0.010                               | 0.051                             | 1               |
| 08357         | Dibenz(a,h)anthracene     | 53-70-3                  | 0.93               | 0.010                               | 0.051                             | 1               |
| 08357         | Fluoranthene              | 206-44-0                 | 0.95               | 0.010                               | 0.051                             | 1               |
| 08357         | Fluorene                  | 86-73-7                  | 1.1                | 0.010                               | 0.051                             | 1               |
| 08357         | Indeno(1,2,3-cd)pyrene    | 193-39-5                 | 0.85               | 0.010                               | 0.051                             | 1               |
| 08357         | 1-Methylnaphthalene       | 90-12-0                  | 1.1                | 0.010                               | 0.051                             | 1               |
| 08357         | 2-Methylnaphthalene       | 91-57-6                  | 1.1                | 0.010                               | 0.051                             | 1               |
| 08357         | Naphthalene               | 91-20-3                  | 1.0                | 0.030                               | 0.051                             | 1               |
| 08357         | Phenanthrene              | 85-01-8                  | 0.86               | 0.030                               | 0.051                             | 1               |
| 08357         | Pyrene                    | 129-00-0                 | 0.81               | 0.010                               | 0.051                             | 1               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 45.7               | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | 0.155              | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | 2.06               | 0.00033                             | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | 0.0512             | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 10.1               | 0.0334                              | 0.200                             | 1               |

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

**Sample Description:** WS-006(0.5-1.0)100913MSD Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231428  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 09:20 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

90605 SDG#: PEM05-07MSD

| CAT No.              | Analysis Name      | CAS Number          | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                    | <b>SW-846 6010B</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07051                | Chromium           | 7440-47-3           | 0.206              | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead               | 7439-92-1           | 0.158              | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium          | 7439-95-4           | 4.95               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel             | 7440-02-0           | 0.521              | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium           | 7782-49-2           | 0.159              | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver             | 7440-22-4           | 0.0458             | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium           | 7440-62-2           | 0.522              | 0.0020                              | 0.0050                            | 1               |
|                      |                    | <b>SW-846 7470A</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury            | 7439-97-6           | 0.0011             | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                    | <b>EPA 1664A</b>    | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease) | n.a.                | 11.4               | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/12/2013 02:16       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/12/2013 02:16       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 06:19       | Brian K Graham       | 1               |
| 10470   | BNA Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:39       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:39       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:39       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:39       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:39       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:39       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:39       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:39       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:39       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:39       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 08:39       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 09:38       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)             | EPA 1664A               | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

Sample Description: WS-006(0.5-1.0)100913DUP Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231429  
LL Group # 1425288  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/09/2013 09:20 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

90605 SDG#: PEM05-07DUP

| CAT No.              | Analysis Name           | CAS Number | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|-------------------------|------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                         |            |                    |                                     |                                   |                 |
|                      | <b>SM 2340 B-1997</b>   |            | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 06256                | Total Hardness as CaCO3 | 471-34-1   | 26.7               | 0.033                               | 0.20                              | 1               |
|                      | <b>SW-846 6010B</b>     |            | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07035                | Arsenic                 | 7440-38-2  | N.D.               | 0.0068                              | 0.0200                            | 1               |
| 07046                | Barium                  | 7440-39-3  | 0.0375             | 0.00033                             | 0.0050                            | 1               |
| 07049                | Cadmium                 | 7440-43-9  | N.D.               | 0.00076                             | 0.0050                            | 1               |
| 01750                | Calcium                 | 7440-70-2  | 5.97               | 0.0334                              | 0.200                             | 1               |
| 07051                | Chromium                | 7440-47-3  | N.D.               | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead                    | 7439-92-1  | N.D.               | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium               | 7439-95-4  | 2.88               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel                  | 7440-02-0  | N.D.               | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium                | 7782-49-2  | N.D.               | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver                  | 7440-22-4  | N.D.               | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium                | 7440-62-2  | N.D.               | 0.0020                              | 0.0050                            | 1               |
|                      | <b>SW-846 7470A</b>     |            | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury                 | 7439-97-6  | N.D.               | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                         |            |                    |                                     |                                   |                 |
|                      | <b>EPA 1664A</b>        |            | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease)      | n.a.       | N.D.               | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                 | Method         | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|-------------------------------|----------------|--------|--------------|------------------------|----------------------|-----------------|
| 06256   | Total Hardness as CaCO3       | SM 2340 B-1997 | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                       | SW-846 6010B   | 1      | 132831848002 | 10/16/2013 08:31       | Eric L Eby           | 1               |
| 07046   | Barium                        | SW-846 6010B   | 1      | 132831848002 | 10/16/2013 08:31       | Eric L Eby           | 1               |
| 07049   | Cadmium                       | SW-846 6010B   | 1      | 132831848002 | 10/16/2013 08:31       | Eric L Eby           | 1               |
| 01750   | Calcium                       | SW-846 6010B   | 1      | 132831848002 | 10/16/2013 08:31       | Eric L Eby           | 1               |
| 07051   | Chromium                      | SW-846 6010B   | 1      | 132831848002 | 10/16/2013 08:31       | Eric L Eby           | 1               |
| 07055   | Lead                          | SW-846 6010B   | 1      | 132831848002 | 10/16/2013 08:31       | Eric L Eby           | 1               |
| 01757   | Magnesium                     | SW-846 6010B   | 1      | 132831848002 | 10/16/2013 08:31       | Eric L Eby           | 1               |
| 07061   | Nickel                        | SW-846 6010B   | 1      | 132831848002 | 10/16/2013 08:31       | Eric L Eby           | 1               |
| 07036   | Selenium                      | SW-846 6010B   | 1      | 132831848002 | 10/16/2013 08:31       | Eric L Eby           | 1               |
| 07066   | Silver                        | SW-846 6010B   | 1      | 132831848002 | 10/16/2013 08:31       | Eric L Eby           | 1               |
| 07071   | Vanadium                      | SW-846 6010B   | 1      | 132831848002 | 10/16/2013 08:31       | Eric L Eby           | 1               |
| 00259   | Mercury                       | SW-846 7470A   | 1      | 132835713003 | 10/13/2013 09:34       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec) | SW-846 3005A   | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest            | SW-846 7470A   | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)            | EPA 1664A      | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

**Sample Description:** WS-005(Surface)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231430  
LL Group # 1425288  
Account # 14739

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

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

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

905-S SDG#: PEM05-08

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

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

**Sample Description:** WS-005(Surface)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231430  
LL Group # 1425288  
Account # 14739

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

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

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

905-S SDG#: PEM05-08

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 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               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 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               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 26.6               | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | N.D.               | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | 0.0294             | 0.00033                             | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | N.D.               | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 6.00               | 0.0334                              | 0.200                             | 1               |

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

**Sample Description:** WS-005(Surface)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231430  
LL Group # 1425288  
Account # 14739

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

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

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

905-S SDG#: PEM05-08

| CAT No.              | Analysis Name      | CAS Number          | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>SW-846 6010B</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07051                | Chromium           | 7440-47-3           | N.D.               | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead               | 7439-92-1           | N.D.               | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium          | 7439-95-4           | 2.81               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel             | 7440-02-0           | N.D.               | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium           | 7782-49-2           | N.D.               | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver             | 7440-22-4           | N.D.               | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium           | 7440-62-2           | N.D.               | 0.0020                              | 0.0050                            | 1               |
|                      |                    | <b>SW-846 7470A</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury            | 7439-97-6           | N.D.               | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>EPA 1664A</b>    | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease) | n.a.                | 1.5 J              | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/12/2013 02:37       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/12/2013 02:37       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 09:32       | Brian K Graham       | 1               |
| 10470   | BNA Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:19       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:19       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:19       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:19       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:19       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:19       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:19       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:19       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:19       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:19       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:19       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 09:40       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)             | EPA 1664A               | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

**Sample Description:** WS-011(1.5-2.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231431  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 10:55 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91115 SDG#: PEM05-09

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

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

**Sample Description:** WS-011(1.5-2.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231431  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 10:55 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91115 SDG#: PEM05-09

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 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               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 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               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 27.0               | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | N.D.               | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | 0.0434             | 0.00033                             | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | N.D.               | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 5.96               | 0.0334                              | 0.200                             | 1               |

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

**Sample Description:** WS-011(1.5-2.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231431  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 10:55 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91115 SDG#: PEM05-09

| CAT No.              | Analysis Name      | CAS Number          | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>SW-846 6010B</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07051                | Chromium           | 7440-47-3           | N.D.               | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead               | 7439-92-1           | N.D.               | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium          | 7439-95-4           | 2.94               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel             | 7440-02-0           | N.D.               | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium           | 7782-49-2           | N.D.               | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver             | 7440-22-4           | N.D.               | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium           | 7440-62-2           | N.D.               | 0.0020                              | 0.0050                            | 1               |
|                      |                    | <b>SW-846 7470A</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury            | 7439-97-6           | N.D.               | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>EPA 1664A</b>    | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease) | n.a.                | N.D.               | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/12/2013 02:58       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/12/2013 02:58       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 09:59       | Brian K Graham       | 1               |
| 10470   | BNA Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:23       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:23       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:23       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:23       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:23       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:23       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:23       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:23       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:23       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:23       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:23       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 09:42       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)             | EPA 1664A               | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

**Sample Description:** WS-011(5.0-5.5)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231432  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 11:05 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91150 SDG#: PEM05-10

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

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

**Sample Description:** WS-011(5.0-5.5)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231432  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 11:05 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91150 SDG#: PEM05-10

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 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               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 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               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 27.3               | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | N.D.               | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | 0.0502             | 0.00033                             | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | N.D.               | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 6.00               | 0.0334                              | 0.200                             | 1               |

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

**Sample Description:** WS-011(5.0-5.5)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231432  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 11:05 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

91150 SDG#: PEM05-10

| CAT No.              | Analysis Name      | CAS Number          | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>SW-846 6010B</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07051                | Chromium           | 7440-47-3           | N.D.               | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead               | 7439-92-1           | N.D.               | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium          | 7439-95-4           | 2.99               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel             | 7440-02-0           | N.D.               | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium           | 7782-49-2           | N.D.               | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver             | 7440-22-4           | N.D.               | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium           | 7440-62-2           | N.D.               | 0.0020                              | 0.0050                            | 1               |
|                      |                    | <b>SW-846 7470A</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury            | 7439-97-6           | N.D.               | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>EPA 1664A</b>    | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease) | n.a.                | N.D.               | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/12/2013 03:20       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/12/2013 03:20       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 10:26       | Brian K Graham       | 1               |
| 10470   | BNA Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:26       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:26       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:26       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:26       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:26       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:26       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:26       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:26       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:26       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:26       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:26       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 09:49       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)             | EPA 1664A               | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

**Sample Description:** WS-002(Surface)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231433  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 11:25 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

902-S SDG#: PEM05-11

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

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

**Sample Description:** WS-002(Surface)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231433  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 11:25 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

902-S SDG#: PEM05-11

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 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               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 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               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 26.1               | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | N.D.               | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | 0.0370             | 0.00033                             | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | N.D.               | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 5.80               | 0.0334                              | 0.200                             | 1               |

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

**Sample Description:** WS-002(Surface)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231433  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 11:25 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

902-S SDG#: PEM05-11

| CAT No.              | Analysis Name      | CAS Number          | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>SW-846 6010B</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07051                | Chromium           | 7440-47-3           | N.D.               | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead               | 7439-92-1           | N.D.               | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium          | 7439-95-4           | 2.82               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel             | 7440-02-0           | N.D.               | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium           | 7782-49-2           | N.D.               | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver             | 7440-22-4           | N.D.               | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium           | 7440-62-2           | N.D.               | 0.0020                              | 0.0050                            | 1               |
|                      |                    | <b>SW-846 7470A</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury            | 7439-97-6           | N.D.               | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>EPA 1664A</b>    | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease) | n.a.                | N.D.               | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/12/2013 03:41       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/12/2013 03:41       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 10:54       | Brian K Graham       | 1               |
| 10470   | BNA Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:30       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:30       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:30       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:30       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:30       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:30       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:30       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:30       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:30       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:30       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:30       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 09:51       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)             | EPA 1664A               | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

**Sample Description:** WS-018(Surface)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231434  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 11:50 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

918-S SDG#: PEM05-12

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

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

**Sample Description:** WS-018(Surface)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231434  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 11:50 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

918-S SDG#: PEM05-12

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 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               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 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               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 27.8               | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | N.D.               | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | 0.0389             | 0.00033                             | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | N.D.               | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 6.20               | 0.0334                              | 0.200                             | 1               |

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

**Sample Description:** WS-018(Surface)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231434  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 11:50 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

918-S SDG#: PEM05-12

| CAT No.              | Analysis Name       | CAS Number | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|---------------------|------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                     |            |                    |                                     |                                   |                 |
|                      | <b>SW-846 6010B</b> |            | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07051                | Chromium            | 7440-47-3  | N.D.               | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead                | 7439-92-1  | N.D.               | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium           | 7439-95-4  | 2.99               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel              | 7440-02-0  | N.D.               | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium            | 7782-49-2  | N.D.               | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver              | 7440-22-4  | N.D.               | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium            | 7440-62-2  | N.D.               | 0.0020                              | 0.0050                            | 1               |
|                      | <b>SW-846 7470A</b> |            | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury             | 7439-97-6  | N.D.               | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                     |            |                    |                                     |                                   |                 |
|                      | <b>EPA 1664A</b>    |            | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease)  | n.a.       | N.D.               | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/12/2013 04:02       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/12/2013 04:02       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 11:21       | Brian K Graham       | 1               |
| 10470   | BNA Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:34       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:34       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:34       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:34       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:34       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:34       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:34       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:34       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:34       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:34       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:34       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 09:53       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)             | EPA 1664A               | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

**Sample Description:** WS-003(Surface)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231435  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 12:00 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

903-S SDG#: PEM05-13

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

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

**Sample Description:** WS-003(Surface)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231435  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 12:00 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

903-S SDG#: PEM05-13

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 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               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 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               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 26.9               | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | N.D.               | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | 0.0352             | 0.00033                             | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | N.D.               | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 5.95               | 0.0334                              | 0.200                             | 1               |

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

**Sample Description:** WS-003(Surface)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231435  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 12:00 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

903-S SDG#: PEM05-13

| CAT No.              | Analysis Name      | CAS Number          | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>SW-846 6010B</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07051                | Chromium           | 7440-47-3           | N.D.               | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead               | 7439-92-1           | N.D.               | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium          | 7439-95-4           | 2.92               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel             | 7440-02-0           | N.D.               | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium           | 7782-49-2           | N.D.               | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver             | 7440-22-4           | N.D.               | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium           | 7440-62-2           | N.D.               | 0.0020                              | 0.0050                            | 1               |
|                      |                    | <b>SW-846 7470A</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury            | 7439-97-6           | N.D.               | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>EPA 1664A</b>    | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease) | n.a.                | N.D.               | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/12/2013 04:23       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/12/2013 04:23       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 11:49       | Brian K Graham       | 1               |
| 10470   | BNA Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:38       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:38       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:38       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:38       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:38       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:38       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:38       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:38       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:38       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:38       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:38       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 09:55       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)             | EPA 1664A               | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

**Sample Description:** WS-007(0.5-1.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231436  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 12:30 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

90705 SDG#: PEM05-14

| CAT No. | Analysis Name               | CAS Number        | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------|-----------------------------|-------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| GC/MS   | Volatiles                   | SW-846 8260B 25mL | ug/l               | ug/l                                | ug/l                              |                 |
|         | purge                       |                   |                    |                                     |                                   |                 |
| 02898   | Acetone                     | 67-64-1           | 4.0 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)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231436  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 12:30 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

90705 SDG#: PEM05-14

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 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               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 08357         | Acenaphthene              | 83-32-9                  | N.D.               | 0.011                               | 0.054                             | 1               |
| 08357         | Acenaphthylene            | 208-96-8                 | N.D.               | 0.011                               | 0.054                             | 1               |
| 08357         | Anthracene                | 120-12-7                 | N.D.               | 0.011                               | 0.054                             | 1               |
| 08357         | Benzo(a)anthracene        | 56-55-3                  | N.D.               | 0.011                               | 0.054                             | 1               |
| 08357         | Benzo(a)pyrene            | 50-32-8                  | N.D.               | 0.011                               | 0.054                             | 1               |
| 08357         | Benzo(b)fluoranthene      | 205-99-2                 | N.D.               | 0.011                               | 0.054                             | 1               |
| 08357         | Benzo(g,h,i)perylene      | 191-24-2                 | N.D.               | 0.011                               | 0.054                             | 1               |
| 08357         | Benzo(k)fluoranthene      | 207-08-9                 | N.D.               | 0.011                               | 0.054                             | 1               |
| 08357         | Chrysene                  | 218-01-9                 | N.D.               | 0.011                               | 0.054                             | 1               |
| 08357         | Dibenz(a,h)anthracene     | 53-70-3                  | N.D.               | 0.011                               | 0.054                             | 1               |
| 08357         | Fluoranthene              | 206-44-0                 | N.D.               | 0.011                               | 0.054                             | 1               |
| 08357         | Fluorene                  | 86-73-7                  | N.D.               | 0.011                               | 0.054                             | 1               |
| 08357         | Indeno(1,2,3-cd)pyrene    | 193-39-5                 | N.D.               | 0.011                               | 0.054                             | 1               |
| 08357         | 1-Methylnaphthalene       | 90-12-0                  | 0.013 J            | 0.011                               | 0.054                             | 1               |
| 08357         | 2-Methylnaphthalene       | 91-57-6                  | N.D.               | 0.011                               | 0.054                             | 1               |
| 08357         | Naphthalene               | 91-20-3                  | 0.064              | 0.032                               | 0.054                             | 1               |
| 08357         | Phenanthrene              | 85-01-8                  | N.D.               | 0.032                               | 0.054                             | 1               |
| 08357         | Pyrene                    | 129-00-0                 | N.D.               | 0.011                               | 0.054                             | 1               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 19.5               | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | N.D.               | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | 0.0353             | 0.0033                              | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | N.D.               | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 4.60               | 0.0334                              | 0.200                             | 1               |

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

**Sample Description:** WS-007(0.5-1.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231436  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 12:30 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

90705 SDG#: PEM05-14

| CAT No.              | Analysis Name      | CAS Number          | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>SW-846 6010B</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07051                | Chromium           | 7440-47-3           | N.D.               | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead               | 7439-92-1           | N.D.               | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium          | 7439-95-4           | 1.96               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel             | 7440-02-0           | 0.0021 J           | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium           | 7782-49-2           | N.D.               | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver             | 7440-22-4           | N.D.               | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium           | 7440-62-2           | N.D.               | 0.0020                              | 0.0050                            | 1               |
|                      |                    | <b>SW-846 7470A</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury            | 7439-97-6           | N.D.               | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>EPA 1664A</b>    | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease) | n.a.                | 1.7 J              | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/12/2013 04:44       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/12/2013 04:44       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 12:16       | Brian K Graham       | 1               |
| 10470   | BNA Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:50       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:50       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:50       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:50       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:50       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:50       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:50       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:50       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:50       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:50       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:50       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 09:58       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)             | EPA 1664A               | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

**Sample Description:** WS-001(0.5-1.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231437  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 12:40 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

90105 SDG#: PEM05-15

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

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

**Sample Description:** WS-001(0.5-1.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231437  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 12:40 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

90105 SDG#: PEM05-15

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 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               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 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               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 26.9               | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | N.D.               | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | 0.0353             | 0.00033                             | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | N.D.               | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 6.01               | 0.0334                              | 0.200                             | 1               |

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

**Sample Description:** WS-001(0.5-1.0)100913 Grab Surface Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231437  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 12:40 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

90105 SDG#: PEM05-15

| CAT No.              | Analysis Name      | CAS Number          | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|----------------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>Metals</b>        |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>SW-846 6010B</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 07051                | Chromium           | 7440-47-3           | N.D.               | 0.0016                              | 0.0150                            | 1               |
| 07055                | Lead               | 7439-92-1           | N.D.               | 0.0047                              | 0.0150                            | 1               |
| 01757                | Magnesium          | 7439-95-4           | 2.88               | 0.0167                              | 0.100                             | 1               |
| 07061                | Nickel             | 7440-02-0           | N.D.               | 0.0015                              | 0.0100                            | 1               |
| 07036                | Selenium           | 7782-49-2           | N.D.               | 0.0084                              | 0.0200                            | 1               |
| 07066                | Silver             | 7440-22-4           | N.D.               | 0.0021                              | 0.0050                            | 1               |
| 07071                | Vanadium           | 7440-62-2           | N.D.               | 0.0020                              | 0.0050                            | 1               |
|                      |                    | <b>SW-846 7470A</b> | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 00259                | Mercury            | 7439-97-6           | N.D.               | 0.000060                            | 0.00020                           | 1               |
| <b>Wet Chemistry</b> |                    |                     |                    |                                     |                                   |                 |
|                      |                    | <b>EPA 1664A</b>    | <b>mg/l</b>        | <b>mg/l</b>                         | <b>mg/l</b>                       |                 |
| 08079                | HEM (oil & grease) | n.a.                | N.D.               | 1.4                                 | 5.0                               | 1               |

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/12/2013 05:06       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/12/2013 05:06       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 12:44       | Brian K Graham       | 1               |
| 10470   | BNA Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:54       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:54       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:54       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:54       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:54       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:54       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:54       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:54       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:54       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:54       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:54       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 10:00       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |
| 08079   | HEM (oil & grease)             | EPA 1664A               | 1      | 13289807903A | 10/16/2013 18:30       | Michelle L Lalli     | 1               |

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

Sample Description: WS-EB-86-100913 Grab Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231438  
LL Group # 1425288  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/09/2013 14:00 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

9EB86 SDG#: PEM05-16EB\*

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

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

**Sample Description:** WS-EB-86-100913 Grab Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231438  
LL Group # 1425288  
Account # 14739

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

Collected: 10/09/2013 14:00 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

9EB86 SDG#: PEM05-16EB\*

| CAT No.       | Analysis Name             | CAS Number               | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---------------|---------------------------|--------------------------|--------------------|-------------------------------------|-----------------------------------|-----------------|
| <b>GC/MS</b>  | <b>Volatiles</b>          | <b>SW-846 8260B 25mL</b> | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
|               | <b>purge</b>              |                          |                    |                                     |                                   |                 |
| 02898         | n-Propylbenzene           | 103-65-1                 | N.D.               | 0.1                                 | 0.5                               | 1               |
| 02898         | Styrene                   | 100-42-5                 | N.D.               | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,1,1,2-Tetrachloroethane | 630-20-6                 | N.D.               | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,1,2,2-Tetrachloroethane | 79-34-5                  | N.D.               | 0.1                                 | 0.5                               | 1               |
| 02898         | Tetrachloroethene         | 127-18-4                 | N.D.               | 0.1                                 | 0.5                               | 1               |
| 02898         | Tetrahydrofuran           | 109-99-9                 | N.D.               | 2.0                                 | 5.0                               | 1               |
| 02898         | Toluene                   | 108-88-3                 | 0.1 J              | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,2,3-Trichlorobenzene    | 87-61-6                  | N.D.               | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,2,4-Trichlorobenzene    | 120-82-1                 | N.D.               | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,1,1-Trichloroethane     | 71-55-6                  | N.D.               | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,1,2-Trichloroethane     | 79-00-5                  | N.D.               | 0.1                                 | 0.5                               | 1               |
| 02898         | Trichloroethene           | 79-01-6                  | N.D.               | 0.1                                 | 0.5                               | 1               |
| 02898         | Trichlorofluoromethane    | 75-69-4                  | N.D.               | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,2,3-Trichloropropane    | 96-18-4                  | N.D.               | 0.3                                 | 1.0                               | 1               |
| 02898         | 1,2,4-Trimethylbenzene    | 95-63-6                  | N.D.               | 0.1                                 | 0.5                               | 1               |
| 02898         | 1,3,5-Trimethylbenzene    | 108-67-8                 | N.D.               | 0.1                                 | 0.5                               | 1               |
| 02898         | Vinyl Chloride            | 75-01-4                  | N.D.               | 0.1                                 | 0.5                               | 1               |
| 02898         | Xylene (Total)            | 1330-20-7                | N.D.               | 0.1                                 | 0.5                               | 1               |
| <b>GC/MS</b>  | <b>Semivolatiles</b>      | <b>SW-846 8270C SIM</b>  | <b>ug/l</b>        | <b>ug/l</b>                         | <b>ug/l</b>                       |                 |
| 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               |
| <b>Metals</b> | <b>SM 2340 B-1997</b>     | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 06256         | Total Hardness as CaCO3   | 471-34-1                 | 0.14 J             | 0.033                               | 0.20                              | 1               |
|               | <b>SW-846 6010B</b>       | <b>mg/l</b>              | <b>mg/l</b>        | <b>mg/l</b>                         |                                   |                 |
| 07035         | Arsenic                   | 7440-38-2                | N.D.               | 0.0068                              | 0.0200                            | 1               |
| 07046         | Barium                    | 7440-39-3                | N.D.               | 0.00033                             | 0.0050                            | 1               |
| 07049         | Cadmium                   | 7440-43-9                | N.D.               | 0.00076                             | 0.0050                            | 1               |
| 01750         | Calcium                   | 7440-70-2                | 0.0559 J           | 0.0334                              | 0.200                             | 1               |

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

Sample Description: WS-EB-86-100913 Grab Water  
Mayflower, AR  
Pipeline Incident

LL Sample # WW 7231438  
LL Group # 1425288  
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/09/2013 14:00 by RL

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

Submitted: 10/10/2013 09:50

Reported: 10/17/2013 10:51

9EB86 SDG#: PEM05-16EB\*

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

## General Sample Comments

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name                  | Method                  | Trial# | Batch#       | Analysis Date and Time | Analyst              | Dilution Factor |
|---------|--------------------------------|-------------------------|--------|--------------|------------------------|----------------------|-----------------|
| 02898   | Silvertip & Mayflower VOCs8260 | SW-846 8260B 25mL purge | 1      | I132842AA    | 10/11/2013 22:22       | Kevin A Sposito      | 1               |
| 01163   | GC/MS VOA Water Prep           | SW-846 5030B            | 1      | I132842AA    | 10/11/2013 22:22       | Kevin A Sposito      | 1               |
| 08357   | PAHs in waters by SIM          | SW-846 8270C SIM        | 1      | 13283WAN026  | 10/12/2013 13:11       | Brian K Graham       | 1               |
| 10470   | BNP Water Extraction (SIM)     | SW-846 3510C            | 1      | 13283WAN026  | 10/11/2013 10:00       | David S Schrum       | 1               |
| 06256   | Total Hardness as CaCO3        | SM 2340 B-1997          | 1      | 132896256012 | 10/16/2013 13:10       | Jennifer L Moyer     | 1               |
| 07035   | Arsenic                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:58       | Eric L Eby           | 1               |
| 07046   | Barium                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:58       | Eric L Eby           | 1               |
| 07049   | Cadmium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:58       | Eric L Eby           | 1               |
| 01750   | Calcium                        | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:58       | Eric L Eby           | 1               |
| 07051   | Chromium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:58       | Eric L Eby           | 1               |
| 07055   | Lead                           | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:58       | Eric L Eby           | 1               |
| 01757   | Magnesium                      | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:58       | Eric L Eby           | 1               |
| 07061   | Nickel                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:58       | Eric L Eby           | 1               |
| 07036   | Selenium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:58       | Eric L Eby           | 1               |
| 07066   | Silver                         | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:58       | Eric L Eby           | 1               |
| 07071   | Vanadium                       | SW-846 6010B            | 1      | 132831848002 | 10/16/2013 09:58       | Eric L Eby           | 1               |
| 00259   | Mercury                        | SW-846 7470A            | 1      | 132835713003 | 10/13/2013 10:02       | Damary Valentin      | 1               |
| 01848   | WW SW846 ICP Digest (tot rec)  | SW-846 3005A            | 1      | 132831848002 | 10/10/2013 23:30       | Annamaria Stipkovits | 1               |
| 05713   | WW SW846 Hg Digest             | SW-846 7470A            | 1      | 132835713003 | 10/11/2013 15:15       | Nelli S Markaryan    | 1               |

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

## Quality Control Summary

Client Name: ExxonMobil c/o Arcadis  
Reported: 10/17/13 at 10:51 AM

Group Number: 1425288

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

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

## Laboratory Compliance Quality Control

| <u>Analysis Name</u>        | <u>Blank Result</u>                                | <u>Blank MDL**</u> | <u>Blank LOQ</u> | <u>Report Units</u> | <u>LCS %REC</u> | <u>LCSD %REC</u> | <u>LCS/LCSD Limits</u> | <u>RPD</u> | <u>RPD Max</u> |
|-----------------------------|----------------------------------------------------|--------------------|------------------|---------------------|-----------------|------------------|------------------------|------------|----------------|
| Batch number: I132842AA     | Sample number(s): 7231420-7231428, 7231430-7231438 |                    |                  |                     |                 |                  |                        |            |                |
| Acetone                     | N.D.                                               | 3.0                | 5.0              | ug/l                | 122             |                  | 60-139                 |            |                |
| Allyl Chloride              | N.D.                                               | 0.1                | 0.5              | ug/l                | 88              |                  | 61-130                 |            |                |
| Benzene                     | N.D.                                               | 0.1                | 0.5              | ug/l                | 99              |                  | 80-120                 |            |                |
| Bromobenzene                | N.D.                                               | 0.1                | 0.5              | ug/l                | 94              |                  | 80-120                 |            |                |
| Bromochloromethane          | N.D.                                               | 0.1                | 0.5              | ug/l                | 95              |                  | 80-125                 |            |                |
| Bromodichloromethane        | N.D.                                               | 0.1                | 0.5              | ug/l                | 92              |                  | 80-120                 |            |                |
| Bromoform                   | N.D.                                               | 0.1                | 0.5              | ug/l                | 87              |                  | 73-128                 |            |                |
| Bromomethane                | N.D.                                               | 0.1                | 0.5              | ug/l                | 80              |                  | 62-126                 |            |                |
| 2-Butanone                  | N.D.                                               | 1.0                | 5.0              | ug/l                | 114             |                  | 70-130                 |            |                |
| n-Butylbenzene              | N.D.                                               | 0.1                | 0.5              | ug/l                | 91              |                  | 80-120                 |            |                |
| sec-Butylbenzene            | N.D.                                               | 0.1                | 0.5              | ug/l                | 94              |                  | 80-120                 |            |                |
| tert-Butylbenzene           | N.D.                                               | 0.1                | 0.5              | ug/l                | 92              |                  | 80-120                 |            |                |
| Carbon Tetrachloride        | N.D.                                               | 0.1                | 0.5              | ug/l                | 93              |                  | 80-129                 |            |                |
| Chlorobenzene               | N.D.                                               | 0.1                | 0.5              | ug/l                | 94              |                  | 80-120                 |            |                |
| Chloroethane                | N.D.                                               | 0.1                | 0.5              | ug/l                | 82              |                  | 68-120                 |            |                |
| Chloroform                  | N.D.                                               | 0.1                | 0.5              | ug/l                | 97              |                  | 80-120                 |            |                |
| Chloromethane               | N.D.                                               | 0.2                | 0.5              | ug/l                | 80              |                  | 55-120                 |            |                |
| 2-Chlorotoluene             | N.D.                                               | 0.1                | 0.5              | ug/l                | 94              |                  | 80-120                 |            |                |
| 4-Chlorotoluene             | N.D.                                               | 0.1                | 0.5              | ug/l                | 94              |                  | 80-120                 |            |                |
| 1,2-Dibromo-3-chloropropane | N.D.                                               | 0.2                | 0.5              | ug/l                | 107             |                  | 64-141                 |            |                |
| Dibromochloromethane        | N.D.                                               | 0.1                | 0.5              | ug/l                | 90              |                  | 80-126                 |            |                |
| 1,2-Dibromoethane           | N.D.                                               | 0.1                | 0.5              | ug/l                | 96              |                  | 80-120                 |            |                |
| Dibromomethane              | N.D.                                               | 0.1                | 0.5              | ug/l                | 100             |                  | 80-120                 |            |                |
| 1,2-Dichlorobenzene         | N.D.                                               | 0.1                | 0.5              | ug/l                | 96              |                  | 80-120                 |            |                |
| 1,3-Dichlorobenzene         | N.D.                                               | 0.1                | 0.5              | ug/l                | 97              |                  | 80-120                 |            |                |
| 1,4-Dichlorobenzene         | N.D.                                               | 0.1                | 0.5              | ug/l                | 96              |                  | 80-120                 |            |                |
| Dichlorodifluoromethane     | N.D.                                               | 0.1                | 0.5              | ug/l                | 65              |                  | 39-120                 |            |                |
| 1,1-Dichloroethane          | N.D.                                               | 0.1                | 0.5              | ug/l                | 100             |                  | 80-120                 |            |                |
| 1,2-Dichloroethane          | N.D.                                               | 0.1                | 0.5              | ug/l                | 101             |                  | 80-127                 |            |                |
| 1,1-Dichloroethene          | N.D.                                               | 0.1                | 0.5              | ug/l                | 98              |                  | 80-123                 |            |                |
| cis-1,2-Dichloroethene      | N.D.                                               | 0.1                | 0.5              | ug/l                | 97              |                  | 80-120                 |            |                |
| trans-1,2-Dichloroethene    | N.D.                                               | 0.1                | 0.5              | ug/l                | 97              |                  | 80-120                 |            |                |
| Dichlorofluoromethane       | N.D.                                               | 0.2                | 0.5              | ug/l                | 84              |                  | 75-145                 |            |                |
| 1,2-Dichloropropane         | N.D.                                               | 0.1                | 0.5              | ug/l                | 104             |                  | 80-120                 |            |                |
| 1,3-Dichloropropane         | N.D.                                               | 0.1                | 0.5              | ug/l                | 99              |                  | 80-120                 |            |                |
| 2,2-Dichloropropane         | N.D.                                               | 0.1                | 0.5              | ug/l                | 88              |                  | 75-122                 |            |                |
| 1,1-Dichloropropene         | N.D.                                               | 0.1                | 0.5              | ug/l                | 93              |                  | 80-121                 |            |                |
| cis-1,3-Dichloropropene     | N.D.                                               | 0.1                | 0.5              | ug/l                | 95              |                  | 80-123                 |            |                |
| trans-1,3-Dichloropropene   | N.D.                                               | 0.1                | 0.5              | ug/l                | 88              |                  | 80-120                 |            |                |
| Ethyl ether                 | N.D.                                               | 0.1                | 0.5              | ug/l                | 100             |                  | 59-130                 |            |                |
| Ethylbenzene                | N.D.                                               | 0.1                | 0.5              | ug/l                | 93              |                  | 80-120                 |            |                |
| Freon 113                   | N.D.                                               | 0.2                | 0.5              | ug/l                | 88              |                  | 78-132                 |            |                |
| Hexachlorobutadiene         | N.D.                                               | 0.1                | 0.5              | ug/l                | 90              |                  | 73-120                 |            |                |

\*- Outside of specification

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

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

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

**Quality Control Summary**

Client Name: ExxonMobil c/o Arcadis

Group Number: 1425288

Reported: 10/17/13 at 10:51 AM

| <u>Analysis Name</u>        | <u>Blank Result</u> | <u>Blank MDL**</u> | <u>Blank LOQ</u> | <u>Report Units</u> | <u>LCS %REC</u> | <u>LCSD %REC</u> | <u>LCS/LCSD Limits</u> | <u>RPD</u> | <u>RPD Max</u> |
|-----------------------------|---------------------|--------------------|------------------|---------------------|-----------------|------------------|------------------------|------------|----------------|
| Isopropylbenzene            | N.D.                | 0.1                | 0.5              | ug/l                | 90              |                  | 80-120                 |            |                |
| p-Isopropyltoluene          | N.D.                | 0.1                | 0.5              | ug/l                | 92              |                  | 80-120                 |            |                |
| Methyl Tertiary Butyl Ether | N.D.                | 0.1                | 0.5              | ug/l                | 93              |                  | 80-120                 |            |                |
| 4-Methyl-2-Pentanone        | N.D.                | 1.0                | 5.0              | ug/l                | 102             |                  | 69-135                 |            |                |
| Methylene Chloride          | N.D.                | 0.2                | 0.5              | ug/l                | 102             |                  | 80-120                 |            |                |
| n-Propylbenzene             | N.D.                | 0.1                | 0.5              | ug/l                | 95              |                  | 80-120                 |            |                |
| Styrene                     | N.D.                | 0.1                | 0.5              | ug/l                | 92              |                  | 80-120                 |            |                |
| 1,1,1,2-Tetrachloroethane   | N.D.                | 0.1                | 0.5              | ug/l                | 92              |                  | 80-120                 |            |                |
| 1,1,2,2-Tetrachloroethane   | N.D.                | 0.1                | 0.5              | ug/l                | 104             |                  | 80-125                 |            |                |
| Tetrachloroethene           | N.D.                | 0.1                | 0.5              | ug/l                | 90              |                  | 80-120                 |            |                |
| Tetrahydrofuran             | N.D.                | 2.0                | 5.0              | ug/l                | 109             |                  | 65-131                 |            |                |
| Toluene                     | N.D.                | 0.1                | 0.5              | ug/l                | 92              |                  | 80-120                 |            |                |
| 1,2,3-Trichlorobenzene      | N.D.                | 0.1                | 0.5              | ug/l                | 94              |                  | 63-120                 |            |                |
| 1,2,4-Trichlorobenzene      | N.D.                | 0.1                | 0.5              | ug/l                | 91              |                  | 70-120                 |            |                |
| 1,1,1-Trichloroethane       | N.D.                | 0.1                | 0.5              | ug/l                | 93              |                  | 80-120                 |            |                |
| 1,1,2-Trichloroethane       | N.D.                | 0.1                | 0.5              | ug/l                | 100             |                  | 80-120                 |            |                |
| Trichloroethene             | N.D.                | 0.1                | 0.5              | ug/l                | 96              |                  | 80-120                 |            |                |
| Trichlorofluoromethane      | N.D.                | 0.1                | 0.5              | ug/l                | 84              |                  | 77-132                 |            |                |
| 1,2,3-Trichloropropane      | N.D.                | 0.3                | 1.0              | ug/l                | 103             |                  | 80-120                 |            |                |
| 1,2,4-Trimethylbenzene      | N.D.                | 0.1                | 0.5              | ug/l                | 94              |                  | 80-120                 |            |                |
| 1,3,5-Trimethylbenzene      | N.D.                | 0.1                | 0.5              | ug/l                | 94              |                  | 80-120                 |            |                |
| Vinyl Chloride              | N.D.                | 0.1                | 0.5              | ug/l                | 79              |                  | 65-127                 |            |                |
| Xylene (Total)              | N.D.                | 0.1                | 0.5              | ug/l                | 91              |                  | 80-120                 |            |                |

|                           |                                                    |       |       |      |     |  |        |  |  |
|---------------------------|----------------------------------------------------|-------|-------|------|-----|--|--------|--|--|
| Batch number: 13283WAN026 | Sample number(s): 7231420-7231428, 7231430-7231438 |       |       |      |     |  |        |  |  |
| Acenaphthene              | N.D.                                               | 0.010 | 0.050 | ug/l | 103 |  | 77-118 |  |  |
| Acenaphthylene            | N.D.                                               | 0.010 | 0.050 | ug/l | 112 |  | 80-123 |  |  |
| Anthracene                | N.D.                                               | 0.010 | 0.050 | ug/l | 116 |  | 78-123 |  |  |
| Benzo(a)anthracene        | N.D.                                               | 0.010 | 0.050 | ug/l | 117 |  | 73-127 |  |  |
| Benzo(a)pyrene            | N.D.                                               | 0.010 | 0.050 | ug/l | 105 |  | 72-120 |  |  |
| Benzo(b)fluoranthene      | N.D.                                               | 0.010 | 0.050 | ug/l | 131 |  | 79-136 |  |  |
| Benzo(g,h,i)perylene      | N.D.                                               | 0.010 | 0.050 | ug/l | 109 |  | 64-130 |  |  |
| Benzo(k)fluoranthene      | N.D.                                               | 0.010 | 0.050 | ug/l | 97  |  | 73-131 |  |  |
| Chrysene                  | N.D.                                               | 0.010 | 0.050 | ug/l | 100 |  | 76-125 |  |  |
| Dibenz(a,h)anthracene     | N.D.                                               | 0.010 | 0.050 | ug/l | 109 |  | 58-131 |  |  |
| Fluoranthene              | N.D.                                               | 0.010 | 0.050 | ug/l | 115 |  | 79-124 |  |  |
| Fluorene                  | N.D.                                               | 0.010 | 0.050 | ug/l | 109 |  | 74-115 |  |  |
| Indeno(1,2,3-cd)pyrene    | N.D.                                               | 0.010 | 0.050 | ug/l | 103 |  | 62-130 |  |  |
| 1-Methylnaphthalene       | N.D.                                               | 0.010 | 0.050 | ug/l | 114 |  | 80-126 |  |  |
| 2-Methylnaphthalene       | N.D.                                               | 0.010 | 0.050 | ug/l | 112 |  | 81-124 |  |  |
| Naphthalene               | N.D.                                               | 0.030 | 0.050 | ug/l | 106 |  | 75-120 |  |  |
| Phenanthrene              | N.D.                                               | 0.030 | 0.050 | ug/l | 103 |  | 75-120 |  |  |
| Pyrene                    | N.D.                                               | 0.010 | 0.050 | ug/l | 104 |  | 71-130 |  |  |

|                            |                                   |         |        |      |     |  |        |  |  |
|----------------------------|-----------------------------------|---------|--------|------|-----|--|--------|--|--|
| Batch number: 132831848002 | Sample number(s): 7231420-7231438 |         |        |      |     |  |        |  |  |
| Arsenic                    | N.D.                              | 0.0068  | 0.0200 | mg/l | 104 |  | 90-113 |  |  |
| Barium                     | N.D.                              | 0.00033 | 0.0050 | mg/l | 101 |  | 90-110 |  |  |
| Cadmium                    | N.D.                              | 0.00076 | 0.0050 | mg/l | 102 |  | 90-112 |  |  |
| Calcium                    | N.D.                              | 0.0334  | 0.200  | mg/l | 100 |  | 90-112 |  |  |
| Chromium                   | N.D.                              | 0.0016  | 0.0150 | mg/l | 101 |  | 90-110 |  |  |
| Lead                       | N.D.                              | 0.0047  | 0.0150 | mg/l | 106 |  | 88-110 |  |  |
| Magnesium                  | N.D.                              | 0.0167  | 0.100  | mg/l | 100 |  | 89-110 |  |  |
| Nickel                     | N.D.                              | 0.0015  | 0.0100 | mg/l | 104 |  | 90-111 |  |  |
| Selenium                   | N.D.                              | 0.0084  | 0.0200 | mg/l | 102 |  | 80-120 |  |  |
| Silver                     | N.D.                              | 0.0021  | 0.0050 | mg/l | 89  |  | 80-120 |  |  |
| Vanadium                   | N.D.                              | 0.0020  | 0.0050 | mg/l | 102 |  | 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 c/o Arcadis  
Reported: 10/17/13 at 10:51 AM

Group Number: 1425288

| <u>Analysis Name</u>                             | <u>Blank Result</u>                        | <u>Blank MDL**</u> | <u>Blank LOQ</u> | <u>Report Units</u> | <u>LCS %REC</u> | <u>LCSD %REC</u> | <u>LCS/LCSD Limits</u> | <u>RPD</u> | <u>RPD Max</u> |
|--------------------------------------------------|--------------------------------------------|--------------------|------------------|---------------------|-----------------|------------------|------------------------|------------|----------------|
| Batch number: 132835713003<br>Mercury            | Sample number(s): 7231420-7231438<br>N.D.  | 0.00006            | 0.00020          | mg/l                | 105             |                  | 80-120                 |            |                |
| Batch number: 13289807903A<br>HEM (oil & grease) | Sample number(s): 7231420-7231437<br>1.5 J | 1.4                | 5.0              | mg/l                | 88              | 87               | 78-114                 | 1          | 16             |

## Sample Matrix Quality Control

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

| <u>Analysis Name</u>        | <u>MS %REC</u>                                                    | <u>MSD %REC</u> | <u>MS/MSD Limits</u> | <u>RPD</u> | <u>RPD MAX</u> | <u>BKG Conc</u> | <u>DUP Conc</u> | <u>DUP RPD</u> | <u>Dup RPD Max</u> |
|-----------------------------|-------------------------------------------------------------------|-----------------|----------------------|------------|----------------|-----------------|-----------------|----------------|--------------------|
| Batch number: I132842AA     | Sample number(s): 7231420-7231428, 7231430-7231438 UNSPK: 7231426 |                 |                      |            |                |                 |                 |                |                    |
| Acetone                     | 109                                                               | 99              | 57-163               | 10         | 30             |                 |                 |                |                    |
| Allyl Chloride              | 94                                                                | 96              | 56-160               | 2          | 30             |                 |                 |                |                    |
| Benzene                     | 107                                                               | 105             | 87-126               | 2          | 30             |                 |                 |                |                    |
| Bromobenzene                | 97                                                                | 97              | 80-123               | 0          | 30             |                 |                 |                |                    |
| Bromochloromethane          | 97                                                                | 98              | 82-125               | 1          | 30             |                 |                 |                |                    |
| Bromodichloromethane        | 99                                                                | 97              | 82-133               | 2          | 30             |                 |                 |                |                    |
| Bromoform                   | 89                                                                | 88              | 60-138               | 2          | 30             |                 |                 |                |                    |
| Bromomethane                | 82                                                                | 81              | 66-130               | 2          | 30             |                 |                 |                |                    |
| 2-Butanone                  | 97                                                                | 89              | 56-160               | 8          | 30             |                 |                 |                |                    |
| n-Butylbenzene              | 101                                                               | 100             | 83-131               | 1          | 30             |                 |                 |                |                    |
| sec-Butylbenzene            | 103                                                               | 102             | 84-128               | 0          | 30             |                 |                 |                |                    |
| tert-Butylbenzene           | 101                                                               | 101             | 84-135               | 0          | 30             |                 |                 |                |                    |
| Carbon Tetrachloride        | 107                                                               | 104             | 81-148               | 2          | 30             |                 |                 |                |                    |
| Chlorobenzene               | 100                                                               | 99              | 78-133               | 2          | 30             |                 |                 |                |                    |
| Chloroethane                | 87                                                                | 87              | 70-139               | 0          | 30             |                 |                 |                |                    |
| Chloroform                  | 105                                                               | 103             | 86-136               | 2          | 30             |                 |                 |                |                    |
| Chloromethane               | 83                                                                | 81              | 49-135               | 3          | 30             |                 |                 |                |                    |
| 2-Chlorotoluene             | 100                                                               | 100             | 75-134               | 0          | 30             |                 |                 |                |                    |
| 4-Chlorotoluene             | 99                                                                | 99              | 76-134               | 0          | 30             |                 |                 |                |                    |
| 1,2-Dibromo-3-chloropropane | 91                                                                | 88              | 43-143               | 3          | 30             |                 |                 |                |                    |
| Dibromochloromethane        | 94                                                                | 92              | 79-125               | 2          | 30             |                 |                 |                |                    |
| 1,2-Dibromoethane           | 99                                                                | 97              | 84-127               | 1          | 30             |                 |                 |                |                    |
| Dibromomethane              | 103                                                               | 100             | 83-126               | 3          | 30             |                 |                 |                |                    |
| 1,2-Dichlorobenzene         | 100                                                               | 99              | 83-117               | 1          | 30             |                 |                 |                |                    |
| 1,3-Dichlorobenzene         | 102                                                               | 101             | 79-132               | 0          | 30             |                 |                 |                |                    |
| 1,4-Dichlorobenzene         | 101                                                               | 100             | 79-120               | 0          | 30             |                 |                 |                |                    |
| Dichlorodifluoromethane     | 70                                                                | 68              | 28-136               | 2          | 30             |                 |                 |                |                    |
| 1,1-Dichloroethane          | 109                                                               | 108             | 88-136               | 1          | 30             |                 |                 |                |                    |
| 1,2-Dichloroethane          | 104                                                               | 102             | 82-135               | 2          | 30             |                 |                 |                |                    |
| 1,1-Dichloroethene          | 110                                                               | 109             | 83-150               | 1          | 30             |                 |                 |                |                    |
| cis-1,2-Dichloroethene      | 103                                                               | 102             | 82-129               | 1          | 30             |                 |                 |                |                    |
| trans-1,2-Dichloroethene    | 107                                                               | 105             | 88-127               | 2          | 30             |                 |                 |                |                    |
| Dichlorofluoromethane       | 90                                                                | 88              | 81-161               | 2          | 30             |                 |                 |                |                    |
| 1,2-Dichloropropane         | 110                                                               | 108             | 91-126               | 2          | 30             |                 |                 |                |                    |
| 1,3-Dichloropropane         | 101                                                               | 99              | 80-127               | 2          | 30             |                 |                 |                |                    |
| 2,2-Dichloropropane         | 101                                                               | 100             | 80-134               | 1          | 30             |                 |                 |                |                    |
| 1,1-Dichloropropene         | 106                                                               | 104             | 86-139               | 1          | 30             |                 |                 |                |                    |

\*- Outside of specification

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

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

**Quality Control Summary**

Client Name: ExxonMobil c/o Arcadis

Group Number: 1425288

Reported: 10/17/13 at 10:51 AM

**Sample Matrix Quality Control**

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

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

| <u>Analysis Name</u>        | <u>MS</u><br><u>%REC</u> | <u>MSD</u><br><u>%REC</u> | <u>MS/MSD</u><br><u>Limits</u> | <u>RPD</u> | <u>RPD</u><br><u>MAX</u> | <u>BKG</u><br><u>Conc</u> | <u>DUP</u><br><u>Conc</u> | <u>DUP</u><br><u>RPD</u> | <u>Dup RPD</u><br><u>Max</u> |
|-----------------------------|--------------------------|---------------------------|--------------------------------|------------|--------------------------|---------------------------|---------------------------|--------------------------|------------------------------|
| cis-1,3-Dichloropropene     | 100                      | 101                       | 74-132                         | 0          | 30                       |                           |                           |                          |                              |
| trans-1,3-Dichloropropene   | 92                       | 91                        | 71-128                         | 1          | 30                       |                           |                           |                          |                              |
| Ethyl ether                 | 97                       | 95                        | 57-139                         | 2          | 30                       |                           |                           |                          |                              |
| Ethylbenzene                | 101                      | 98                        | 80-140                         | 2          | 30                       |                           |                           |                          |                              |
| Freon 113                   | 106                      | 104                       | 77-147                         | 2          | 30                       |                           |                           |                          |                              |
| Hexachlorobutadiene         | 98                       | 97                        | 65-128                         | 1          | 30                       |                           |                           |                          |                              |
| Isopropylbenzene            | 99                       | 98                        | 81-133                         | 1          | 30                       |                           |                           |                          |                              |
| p-Isopropyltoluene          | 100                      | 100                       | 84-124                         | 0          | 30                       |                           |                           |                          |                              |
| Methyl Tertiary Butyl Ether | 94                       | 93                        | 82-132                         | 1          | 30                       |                           |                           |                          |                              |
| 4-Methyl-2-Pentanone        | 102                      | 100                       | 69-149                         | 2          | 30                       |                           |                           |                          |                              |
| Methylene Chloride          | 109                      | 106                       | 77-135                         | 2          | 30                       |                           |                           |                          |                              |
| n-Propylbenzene             | 104                      | 103                       | 79-131                         | 0          | 30                       |                           |                           |                          |                              |
| Styrene                     | 98                       | 95                        | 63-151                         | 3          | 30                       |                           |                           |                          |                              |
| 1,1,1,2-Tetrachloroethane   | 98                       | 96                        | 87-126                         | 1          | 30                       |                           |                           |                          |                              |
| 1,1,2,2-Tetrachloroethane   | 104                      | 103                       | 75-131                         | 0          | 30                       |                           |                           |                          |                              |
| Tetrachloroethene           | 100                      | 98                        | 75-129                         | 2          | 30                       |                           |                           |                          |                              |
| Tetrahydrofuran             | 89                       | 87                        | 56-154                         | 3          | 30                       |                           |                           |                          |                              |
| Toluene                     | 99                       | 99                        | 83-127                         | 0          | 30                       |                           |                           |                          |                              |
| 1,2,3-Trichlorobenzene      | 96                       | 98                        | 73-125                         | 2          | 30                       |                           |                           |                          |                              |
| 1,2,4-Trichlorobenzene      | 96                       | 96                        | 77-120                         | 0          | 30                       |                           |                           |                          |                              |
| 1,1,1-Trichloroethane       | 105                      | 102                       | 85-140                         | 2          | 30                       |                           |                           |                          |                              |
| 1,1,2-Trichloroethane       | 102                      | 100                       | 85-129                         | 2          | 30                       |                           |                           |                          |                              |
| Trichloroethene             | 107                      | 104                       | 85-131                         | 2          | 30                       |                           |                           |                          |                              |
| Trichlorofluoromethane      | 94                       | 95                        | 73-139                         | 1          | 30                       |                           |                           |                          |                              |
| 1,2,3-Trichloropropane      | 101                      | 100                       | 76-120                         | 1          | 30                       |                           |                           |                          |                              |
| 1,2,4-Trimethylbenzene      | 100                      | 100                       | 87-126                         | 0          | 30                       |                           |                           |                          |                              |
| 1,3,5-Trimethylbenzene      | 101                      | 101                       | 89-129                         | 0          | 30                       |                           |                           |                          |                              |
| Vinyl Chloride              | 85                       | 84                        | 62-135                         | 1          | 30                       |                           |                           |                          |                              |
| Xylene (Total)              | 99                       | 97                        | 81-137                         | 2          | 30                       |                           |                           |                          |                              |

Batch number: 13283WAN026

Sample number(s): 7231420-7231428,7231430-7231438 UNSPK: 7231426

|                        |     |     |        |    |    |
|------------------------|-----|-----|--------|----|----|
| Acenaphthene           | 96  | 92  | 47-136 | 3  | 30 |
| Acenaphthylene         | 108 | 104 | 33-146 | 4  | 30 |
| Anthracene             | 48* | 49* | 69-119 | 2  | 30 |
| Benzo(a)anthracene     | 95  | 99  | 37-150 | 5  | 30 |
| Benzo(a)pyrene         | 47* | 53* | 64-123 | 13 | 30 |
| Benzo(b)fluoranthene   | 105 | 110 | 33-152 | 5  | 30 |
| Benzo(g,h,i)perylene   | 71  | 79  | 36-138 | 11 | 30 |
| Benzo(k)fluoranthene   | 77  | 80  | 31-142 | 4  | 30 |
| Chrysene               | 86  | 85  | 34-135 | 1  | 30 |
| Dibenz(a,h)anthracene  | 81  | 92  | 17-134 | 13 | 30 |
| Fluoranthene           | 103 | 93  | 39-147 | 10 | 30 |
| Fluorene               | 107 | 103 | 38-149 | 3  | 30 |
| Indeno(1,2,3-cd)pyrene | 75  | 83  | 29-143 | 11 | 30 |
| 1-Methylnaphthalene    | 112 | 108 | 49-152 | 3  | 30 |
| 2-Methylnaphthalene    | 111 | 107 | 51-146 | 3  | 30 |
| Naphthalene            | 106 | 103 | 58-131 | 2  | 30 |
| Phenanthrene           | 100 | 84  | 48-140 | 16 | 30 |
| Pyrene                 | 83  | 80  | 59-125 | 4  | 30 |

Batch number: 132831848002

Sample number(s): 7231420-7231438 UNSPK: 7231426 BKG: 7231426

|         |     |     |        |   |    |      |      |       |    |
|---------|-----|-----|--------|---|----|------|------|-------|----|
| Arsenic | 103 | 103 | 81-123 | 0 | 20 | N.D. | N.D. | 0 (1) | 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 c/o Arcadis

Group Number: 1425288

Reported: 10/17/13 at 10:51 AM

### Sample Matrix Quality Control

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

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

| Analysis Name | MS<br>%REC | MSD<br>%REC | MS/MSD<br>Limits | RPD | RPD<br>MAX | BKG<br>Conc | DUP<br>Conc | DUP<br>RPD | Dup RPD<br>Max |
|---------------|------------|-------------|------------------|-----|------------|-------------|-------------|------------|----------------|
| Barium        | 101        | 101         | 78-118           | 0   | 20         | 0.0376      | 0.0375      | 0          | 20             |
| Cadmium       | 103        | 102         | 83-116           | 0   | 20         | N.D.        | N.D.        | 0 (1)      | 20             |
| Calcium       | 100        | 104         | 75-125           | 2   | 20         | 5.97        | 5.97        | 0          | 20             |
| Chromium      | 103        | 103         | 76-120           | 0   | 20         | N.D.        | N.D.        | 0 (1)      | 20             |
| Lead          | 106        | 105         | 75-125           | 1   | 20         | N.D.        | N.D.        | 0 (1)      | 20             |
| Magnesium     | 100        | 104         | 75-125           | 1   | 20         | 2.87        | 2.88        | 0          | 20             |
| Nickel        | 105        | 104         | 86-115           | 0   | 20         | N.D.        | N.D.        | 0 (1)      | 20             |
| Selenium      | 106        | 106         | 75-125           | 0   | 20         | N.D.        | N.D.        | 0 (1)      | 20             |
| Silver        | 92         | 92          | 75-125           | 0   | 20         | N.D.        | N.D.        | 0 (1)      | 20             |
| Vanadium      | 104        | 104         | 90-117           | 0   | 20         | N.D.        | N.D.        | 0 (1)      | 20             |

Batch number: 132835713003

Sample number(s): 7231420-7231438 UNSPK: 7231426 BKG: 7231426

Mercury

108 107 80-120 1 20 N.D. N.D. 0 (1) 20

Batch number: 13289807903A

Sample number(s): 7231420-7231437 UNSPK: 7231426 BKG: 7231426

HEM (oil & grease)

32\* 27\* 78-114 31\* 29 N.D. N.D. 0 (1) 18

### Surrogate Quality Control

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

Analysis Name: BTEX 25-ml purge

Batch number: I132842AA

Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8 4-Bromofluorobenzene

|         |     |     |    |     |
|---------|-----|-----|----|-----|
| 7231420 | 101 | 107 | 96 | 97  |
| 7231421 | 102 | 109 | 96 | 97  |
| 7231422 | 102 | 110 | 96 | 97  |
| 7231423 | 101 | 106 | 96 | 96  |
| 7231424 | 101 | 104 | 96 | 95  |
| 7231425 | 102 | 106 | 95 | 96  |
| 7231426 | 102 | 107 | 96 | 97  |
| 7231427 | 102 | 107 | 97 | 100 |
| 7231428 | 101 | 103 | 97 | 98  |
| 7231430 | 100 | 106 | 96 | 95  |
| 7231431 | 101 | 106 | 96 | 96  |
| 7231432 | 101 | 109 | 96 | 97  |
| 7231433 | 101 | 106 | 96 | 96  |
| 7231434 | 102 | 109 | 96 | 97  |
| 7231435 | 101 | 106 | 96 | 96  |
| 7231436 | 102 | 105 | 96 | 96  |
| 7231437 | 101 | 108 | 96 | 97  |
| 7231438 | 100 | 104 | 97 | 95  |
| Blank   | 101 | 105 | 96 | 95  |
| LCS     | 102 | 103 | 97 | 98  |
| MS      | 102 | 107 | 97 | 100 |
| MSD     | 101 | 103 | 97 | 98  |

\*- Outside of specification

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

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

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

## Quality Control Summary

Client Name: ExxonMobil c/o Arcadis

Group Number: 1425288

Reported: 10/17/13 at 10:51 AM

### Surrogate Quality Control

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

Analysis Name: PAHs in waters by SIM

Batch number: 13283WAN026

Fluoranthene-d10      Benzo(a)pyrene-d12      1-Methylnaphthalene-d10

|         |     |     |     |
|---------|-----|-----|-----|
| 7231420 | 115 | 96  | 108 |
| 7231421 | 110 | 92  | 101 |
| 7231422 | 107 | 90  | 100 |
| 7231423 | 110 | 94  | 98  |
| 7231424 | 110 | 94  | 100 |
| 7231425 | 115 | 98  | 106 |
| 7231426 | 112 | 94  | 103 |
| 7231427 | 112 | 93  | 108 |
| 7231428 | 96  | 97  | 104 |
| 7231430 | 115 | 101 | 106 |
| 7231431 | 115 | 95  | 105 |
| 7231432 | 112 | 87  | 106 |
| 7231433 | 111 | 92  | 103 |
| 7231434 | 107 | 79  | 103 |
| 7231435 | 104 | 76  | 100 |
| 7231436 | 109 | 103 | 102 |
| 7231437 | 109 | 97  | 102 |
| 7231438 | 107 | 112 | 101 |
| Blank   | 104 | 110 | 100 |
| LCS     | 112 | 121 | 109 |
| MS      | 112 | 93  | 108 |
| MSD     | 96  | 97  | 104 |

Limits: 44-137      62-141      51-136

\*- Outside of specification

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

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

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



Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only  
Group # 1425288 Sample # 7231420-39  
Instructions on reverse side correspond with circled numbers.

1 of 2

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

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



For Eurofins Lancaster Laboratories Environmental use only  
Acct. # 14739 Group # 1425288 Sample # 7231420-39  
Instructions on reverse side correspond with circled numbers.

2 of 2

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

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

**Rachel L. Kreamer** A# 14739 , Gr. # 1425288, Samples 7231420-39

---

**From:** Mott, Lyndi [Lyndi.Mott@arcadis-us.com]  
**Sent:** Thursday, October 10, 2013 3:49 PM  
**To:** Rachel L. Kreamer  
**Cc:** Kegerreis, Kylie  
**Subject:** RE: No TBs in today's coolers

Thank you for notifying us. Please proceed with the volatile analysis.

Lyndi Mott

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

From: Rachel L. Kreamer [mailto:RKreamer@lanasterlabs.com]  
Sent: Thursday, October 10, 2013 2:39 PM  
To: Mott, Lyndi  
Cc: Kathy Klinefelter  
Subject: No TBs in today's coolers

Lyndi,

When the coolers were unpacked today it was noted that there were no trip blanks included with the volatiles. This has been noted on the doc log. We went ahead and scheduled the volatiles along with the other analyses.

Thanks  
Rachel

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

From: 39Scanner@lanasterlabs.com [mailto:39Scanner@lanasterlabs.com]  
Sent: Thursday, October 10, 2013 3:34 PM  
To: Rachel L. Kreamer  
Subject:

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

Scan Date: 10.10.2013 15:34:25 (-0400)  
Queries to: 39Scanner@lanasterlabs.com

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Environmental Sample Administration  
Receipt Documentation Log

1425288

Client/Project: MayflowerShipping Container Sealed: YES NODate of Receipt: 10/10/13Custody Seal Present \* : YES NOTime of Receipt: 0950\* Custody seal was intact unless otherwise noted in the  
discrepancy sectionSource Code: 60-1Package: Chilled Not Chilled

Temperature of Shipping Containers

| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
|----------|----------------|------------------|---------------------------------------|------------------------------------------------|------------------|--------------------------------|----------|
| 1        | DT121          | 2.6              | TB                                    | WI                                             | Y                | B                              |          |
| 2        |                | 1.9              |                                       |                                                |                  |                                |          |
| 3        |                | 1.7              |                                       |                                                |                  |                                |          |
| 4        |                | 0.3              |                                       |                                                |                  |                                |          |
| 5        |                | 0.5              |                                       |                                                |                  |                                |          |
| 6        |                | 0.5              |                                       |                                                |                  |                                |          |

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

## Paperwork Discrepancy/Unpacking Problems:

did not receive trip blanksUnpacker Signature/Emp#: C. Gell 3647 Date/Time: 10/10/13 1032

Issued by Dept. 6042 Management

2174.06

# Explanation of Symbols and Abbreviations

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

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

## Data Qualifiers:

**C** – result confirmed by reanalysis.

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

## U.S. EPA CLP Data Qualifiers:

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

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

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

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

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

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