ANALYTICAL RESULTS

Prepared by: Eurofins Lancaster Laboratories Environmental
Prepared for: ExxonMobil

2425 New Holland Pike
Lancaster, PA 17601
PO Box 4592
Houston TX 77210-4592

July 02, 2014

Project: Mayflower, AR Pipeline Incident

Submittal Date: 06/20/2014
Group Number: 1483436
SDG: PEO06
PO Number: 4410181435
Release Number: SIXSMITH
State of Sample Origin: AR

Client Sample Description | Lancaster Labs (LL) #
--------------------------|------------------------
WS-007(0.5-1.0)061914 Grab Surface Water | 7506358
WS-009(Surface)061914 Grab Surface Water | 7506359
WS-001(0.5-1.0)061914 Grab Surface Water | 7506360
WS-021(Surface)061914 Grab Surface Water | 7506361
WS-004(0.5-1.0)061914 Grab Surface Water | 7506362

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

ELECTRONIC COPY TO ARCADIS Attn: Stephen Barrick
ELECTRONIC COPY TO ARCADIS Attn: Lyndi Mott
ELECTRONIC COPY TO ExxonMobil Attn: Michael J. Firth
ELECTRONIC COPY TO ARCADIS Attn: Emily Leamer
ELECTRONIC COPY TO ARCADIS Attn: Rhiannon Parmalee
ELECTRONIC COPY TO ExxonMobil Attn: Michael L Sixsmith
ELECTRONIC COPY TO ExxonMobil Attn: Julie Foster
ELECTRONIC COPY TO ARCADIS Attn: Kim Abbott
Respectfully Submitted,

[Signature]

Katherine A. Klinefeiler
Principal Specialist

(717) 556-7256
Case Narrative

Project Name: Mayflower, AR Pipeline Incident
LL Group #: 1483436

General Comments:

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

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

Project specific QC samples are not included in this data set.

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

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

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

Analysis Specific Comments:

SW-846 8270C SIM, GC/MS Semivolatiles

Sample #s: 7506358, 7506359, 7506360
The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.
The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
fluoranthene

Sample #s: 7506361, 7506362
The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis.
The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
fluoranthene
The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Batch #: 14171WAJ026 (Sample number(s): 7506358-7506362)
The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window: Fluoranthene
The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7506361, 7506362
Sample Description: WS-007(0.5-1.0)061914 Grab Surface Water  
S20135565 Mayflower, AR  
Pipeline Incident

Project Name: Mayflower, AR Pipeline Incident

Collected: 06/19/2014 10:10 by ZP  
Submitted: 06/20/2014 09:30  
Reported: 07/02/2014 13:48

19007  SDG#: PEO06-01

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### 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.

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

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

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### Laboratory Sample Analysis Record

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<thead>
<tr>
<th>CAT No.</th>
<th>Analysis Name</th>
<th>Method</th>
<th>Trial#</th>
<th>Batch#</th>
<th>Analysis Date and Time</th>
<th>Analyst</th>
<th>Dilution Factor</th>
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<tr>
<td>08357</td>
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<td>BNA Water Extraction (SIM)</td>
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<td>06/21/2014 09:00</td>
<td>Seth A Farrier</td>
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</tr>
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* = This limit was used in the evaluation of the final result
Sample Description: WS-009(Surface)061914 Grab Surface Water
S20135565 Mayflower, AR
Pipeline Incident

Project Name: Mayflower, AR Pipeline Incident

Collected: 06/19/2014 10:15 by ZP
Submitted: 06/20/2014 09:30
Reported: 07/02/2014 13:48

ExxonMobil
PO Box 4592
Houston TX 77210-4592

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**General Sample Comments**

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

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

---

**Laboratory Sample Analysis Record**

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<thead>
<tr>
<th>CAT No.</th>
<th>Analysis Name</th>
<th>Method</th>
<th>Trial# Batch#</th>
<th>Analysis Date and Time</th>
<th>Analyst</th>
<th>Dilution Factor</th>
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</tr>
<tr>
<td>08357</td>
<td>Acenaphthylene</td>
<td>SW-846 8270C SIM</td>
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<td>14171WAJ026</td>
<td>Seth A Farrier</td>
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*All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.*

---

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

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<th>Dilution Factor</th>
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<tr>
<td>08357</td>
<td>PAHs in waters by SIM</td>
<td>SW-846 8270C SIM</td>
<td>1</td>
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<td>Chad A Moline</td>
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</tr>
<tr>
<td>10470</td>
<td>BNA Water Extraction (SIM)</td>
<td>SW-846 3510C</td>
<td>1</td>
<td>14171WAJ026</td>
<td>Seth A Farrier</td>
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*This limit was used in the evaluation of the final result*
Sample Description: WS-001(0.5-1.0)061914 Grab Surface Water
S20135565 Mayflower, AR
Pipeline Incident

Project Name: Mayflower, AR Pipeline Incident

Collected: 06/19/2014 10:25 by ZP
Submitted: 06/20/2014 09:30
Reported: 07/02/2014 13:48

ExxonMobil
PO Box 4592
Houston TX 77210-4592

As Received
Limit of Quantitation

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<tr>
<th>CAT No.</th>
<th>Analysis Name</th>
<th>CAS Number</th>
<th>As Received Result</th>
<th>As Received Method Detection Limit*</th>
<th>As Received Limit of Quantitation</th>
<th>Dilution Factor</th>
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<td>08357</td>
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<td>08357</td>
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<td>0.010</td>
<td>0.051</td>
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<tr>
<td>08357</td>
<td>Benzo(a)anthracene</td>
<td>56-55-3</td>
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<td>0.051</td>
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<td>08357</td>
<td>Benzo(a)pyrene</td>
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<td>0.010</td>
<td>0.051</td>
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<td>08357</td>
<td>Benzo(b)fluoranthene</td>
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<td>N.D.</td>
<td>0.010</td>
<td>0.051</td>
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<td>08357</td>
<td>Benzo(g,h,i)perylene</td>
<td>191-24-2</td>
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<td>0.051</td>
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<td>08357</td>
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<td>08357</td>
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<tr>
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<td>08357</td>
<td>Naphthalene</td>
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<td>N.D.</td>
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<td>08357</td>
<td>Pyrene</td>
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<td>N.D.</td>
<td>0.010</td>
<td>0.051</td>
<td>1</td>
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</table>

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

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<tbody>
<tr>
<td>08357</td>
<td>PAHs in waters by SIM</td>
<td>SW-846 8270C SIM</td>
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<td>14171WAJ026</td>
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<td>Chad A Moline</td>
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<td>10470</td>
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<td>14171WAJ026</td>
<td>06/21/2014 09:00</td>
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*=This limit was used in the evaluation of the final result
Sample Description: WS-021(Surface)061914 Grab Surface Water
S20135565 Mayflower, AR
Pipeline Incident

Project Name: Mayflower, AR Pipeline Incident

Collected: 06/19/2014 10:30 by ZP
Submitted: 06/20/2014 09:30
Reported: 07/02/2014 13:48

19021  SDG#: PEO06-04

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<th>As Received Result</th>
<th>As Received Method</th>
<th>Detection Limit*</th>
<th>As Received Limit of Quantitation</th>
<th>Dilution Factor</th>
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<td>0.051</td>
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<td>08357</td>
<td>Anthracene</td>
<td>120-12-7</td>
<td>N.D.</td>
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<td>0.051</td>
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<td>Benzo(a)anthracene</td>
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<td>0.010</td>
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<tr>
<td>08357</td>
<td>Benzo(a)pyrene</td>
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<td>205-99-2</td>
<td>N.D.</td>
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<td>0.051</td>
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<td>Benzo(g,h,i)perylene</td>
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<td>N.D.</td>
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<td>0.051</td>
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<td>Dibenz(a,h)anthracene</td>
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<td>08357</td>
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<td>206-44-0</td>
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<td>Indeno(1,2,3-cd)pyrene</td>
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<td>0.051</td>
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<td>08357</td>
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<td>08357</td>
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The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis. The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: fluoranthene

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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

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<th>Analysis Name</th>
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<th>Analyst</th>
<th>Dilution Factor</th>
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*This limit was used in the evaluation of the final result
Sample Description: WS-004(0.5-1.0)061914 Grab Surface Water
S20135565 Mayflower, AR
Pipeline Incident

Project Name: Mayflower, AR Pipeline Incident

Collected: 06/19/2014 10:35 by ZP
Submitted: 06/20/2014 09:30
Reported: 07/02/2014 13:48

As Received
Method
Detection Limit*
As Received
Result
As Received
Limit of Quantitation

CAT No. Analysis Name CAS Number As Received Method Analysis Date and Time Batch# Trial# Dilution Factor

GC/MS Semivolatiles SW-846 8270C SIM ug/l ug/l ug/l
08357 Aacenaphthene 83-32-9 N.D. 0.010 0.051 1
08357 Aacenaphthylene 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

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Laboratory Sample Analysis Record

CAT No. Analysis Name Method Trial# Batch# Analysis Date and Time Analyst Dilution Factor
08357 PAHs in waters by SIM SW-846 8270C SIM 1 14171WAJ026 07/02/2014 01:34 Chad A Moline 1
10470 BNA Water Extraction (SIM) SW-846 3510C 1 14171WAJ026 06/21/2014 09:00 Seth A Farrier 1

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

Client Name: ExxonMobil                      Group Number: 1483436
Reported: 07/02/14 at 01:48 PM

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

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

### Laboratory Compliance Quality Control

<table>
<thead>
<tr>
<th>Analysis Name</th>
<th>Blank Result</th>
<th>Blank MDL*</th>
<th>Blank LOQ</th>
<th>Report MDL*</th>
<th>Report LOQ</th>
<th>LCS %REC</th>
<th>LCSD %REC</th>
<th>LCS/LCSD Limits</th>
<th>RPD</th>
<th>RPD Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acenaphthene</td>
<td>N.D.</td>
<td>0.010</td>
<td>0.050</td>
<td>ug/l</td>
<td>102</td>
<td>102</td>
<td>83-119</td>
<td>3</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Acenaphthylene</td>
<td>N.D.</td>
<td>0.010</td>
<td>0.050</td>
<td>ug/l</td>
<td>88</td>
<td>94</td>
<td>81-130</td>
<td>6</td>
<td>30</td>
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<tr>
<td>Anthracene</td>
<td>N.D.</td>
<td>0.010</td>
<td>0.050</td>
<td>ug/l</td>
<td>92</td>
<td>100</td>
<td>83-125</td>
<td>9</td>
<td>30</td>
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<tr>
<td>Benzo(a)anthracene</td>
<td>N.D.</td>
<td>0.010</td>
<td>0.050</td>
<td>ug/l</td>
<td>90</td>
<td>93</td>
<td>79-122</td>
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<tr>
<td>Benzo(a)pyrene</td>
<td>N.D.</td>
<td>0.010</td>
<td>0.050</td>
<td>ug/l</td>
<td>94</td>
<td>97</td>
<td>80-121</td>
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<tr>
<td>Benzo(b)fluoranthene</td>
<td>N.D.</td>
<td>0.010</td>
<td>0.050</td>
<td>ug/l</td>
<td>93</td>
<td>94</td>
<td>79-136</td>
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<td>30</td>
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<tr>
<td>Benzo(g,h,i)perylene</td>
<td>N.D.</td>
<td>0.010</td>
<td>0.050</td>
<td>ug/l</td>
<td>100</td>
<td>106</td>
<td>72-132</td>
<td>6</td>
<td>30</td>
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<tr>
<td>Benzo(k)fluoranthene</td>
<td>N.D.</td>
<td>0.010</td>
<td>0.050</td>
<td>ug/l</td>
<td>90</td>
<td>96</td>
<td>81-131</td>
<td>6</td>
<td>30</td>
<td></td>
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<tr>
<td>Chrysene</td>
<td>N.D.</td>
<td>0.010</td>
<td>0.050</td>
<td>ug/l</td>
<td>97</td>
<td>101</td>
<td>84-118</td>
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<td>30</td>
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<tr>
<td>Dibenz(a,h)anthracene</td>
<td>N.D.</td>
<td>0.010</td>
<td>0.050</td>
<td>ug/l</td>
<td>88</td>
<td>102</td>
<td>66-133</td>
<td>14</td>
<td>30</td>
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<tr>
<td>Fluoranthene</td>
<td>N.D.</td>
<td>0.010</td>
<td>0.050</td>
<td>ug/l</td>
<td>89</td>
<td>92</td>
<td>84-124</td>
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<td>30</td>
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<tr>
<td>Fluorene</td>
<td>N.D.</td>
<td>0.010</td>
<td>0.050</td>
<td>ug/l</td>
<td>93</td>
<td>101</td>
<td>68-132</td>
<td>9</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>N.D.</td>
<td>0.010</td>
<td>0.050</td>
<td>ug/l</td>
<td>91</td>
<td>93</td>
<td>86-130</td>
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<td>1-Methylnaphthalene</td>
<td>N.D.</td>
<td>0.010</td>
<td>0.050</td>
<td>ug/l</td>
<td>89</td>
<td>94</td>
<td>81-131</td>
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<td>30</td>
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<td>2-Methylnaphthalene</td>
<td>N.D.</td>
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<td>0.050</td>
<td>ug/l</td>
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<td>94</td>
<td>81-131</td>
<td>6</td>
<td>30</td>
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<tr>
<td>Phenanthrene</td>
<td>N.D.</td>
<td>0.030</td>
<td>0.050</td>
<td>ug/l</td>
<td>95</td>
<td>96</td>
<td>83-116</td>
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<tr>
<td>Pyrene</td>
<td>N.D.</td>
<td>0.010</td>
<td>0.050</td>
<td>ug/l</td>
<td>95</td>
<td>91</td>
<td>78-125</td>
<td>4</td>
<td>30</td>
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</tr>
</tbody>
</table>

### 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: PAHs in waters by SIM
Batch number: 14171WAJ026

<table>
<thead>
<tr>
<th>Fluoranthene-d10</th>
<th>Benzo(a)pyrene-d12</th>
<th>1-Methylnaphthalene-d10</th>
</tr>
</thead>
<tbody>
<tr>
<td>7506358  89</td>
<td>89</td>
<td>103</td>
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<tr>
<td>7506359  93</td>
<td>68</td>
<td>82</td>
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<tr>
<td>7506360  89</td>
<td>68</td>
<td>82</td>
</tr>
<tr>
<td>7506361  92</td>
<td>57*</td>
<td>79</td>
</tr>
<tr>
<td>7506362  86</td>
<td>46*</td>
<td>70</td>
</tr>
<tr>
<td>Blank     85</td>
<td>96</td>
<td>87</td>
</tr>
<tr>
<td>LCS       84</td>
<td>109</td>
<td>92</td>
</tr>
<tr>
<td>LCSD      92</td>
<td>113</td>
<td>93</td>
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</tbody>
</table>

* Outside of specification
** This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
# Quality Control Summary

**Client Name:** ExxonMobil  
**Group Number:** 1483436  
**Reported:** 07/02/14 at 01:48 PM

## Surrogate Quality Control

<table>
<thead>
<tr>
<th>Limits</th>
<th>59-128</th>
<th>62-141</th>
<th>70-134</th>
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</thead>
</table>

*- Outside of specification  
**- This limit was used in the evaluation of the final result for the blank  
(1) The result for one or both determinations was less than five times the LOQ.  
(2) The unspiked result was more than four times the spike added.
# ExxonMobil Analysis Request/Chain of Custody

**Client Information**
- Facility/ID: Mayflower pipeline Incident
- Site Address: Mayflower AR
- ExxonMobil PM: Mike Sixsmith
- Consultant/Office: Arcadis
- Consultant PM: Steve Barrick
- Phone #: 919-302-6799
- Sampler: Zac Powers

**Matrix**

<table>
<thead>
<tr>
<th>Sediment</th>
<th>Potable</th>
<th>Ground</th>
<th>Surface</th>
</tr>
</thead>
</table>

**Analyses Requested**

<table>
<thead>
<tr>
<th>Preservation Code</th>
<th>Preservation Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>H = HCl</td>
<td>T = Thiosulfate</td>
</tr>
<tr>
<td>N = HNO₃</td>
<td>B = NaOH</td>
</tr>
<tr>
<td>S = H₂SO₄</td>
<td>O = Other</td>
</tr>
</tbody>
</table>

**Remarks**

**Sample Identification**

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Date</th>
<th>Time</th>
<th>Grab</th>
<th>Composite</th>
</tr>
</thead>
<tbody>
<tr>
<td>WS-007</td>
<td>6/19/14</td>
<td>1:10</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>WS-009</td>
<td>6/19/14</td>
<td>1:13</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>WS-001</td>
<td>6/19/14</td>
<td>10:25</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>WS-021</td>
<td>6/19/14</td>
<td>10:30</td>
<td>X</td>
<td>DDU X</td>
</tr>
<tr>
<td>WS-004</td>
<td>6/19/14</td>
<td>10:35</td>
<td>X</td>
<td>X</td>
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</tbody>
</table>

**Turnaround Time Requested (TAT)**
- Standard: 5 day
- 72 hour: 48 hour
- 24 hour: 4 day

**Data Package**
- Type I - Full
- Type VI (Raw Data)
- NJ Reduced
- Locus EIM (default)
- Other

**Received by**
- Date: 6/19/14
- Time: 1:00

**Requisitioned by**
- Date: 6/19/14
- Time: 10:00

**Temperature Upon Receipt**
- 7.2 °C

**Custody Seals Intact?**
- Yes

---

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

The white copy should accompany samples to Eurofins Lancaster Laboratories. The yellow copy should be retained by the client.
Sample Administration Receipt Documentation Log

Client: Mayflower

Delivery and Receipt Information

Delivery Method: UPS
Arrival Timestamp: 06/20/2014 9:30
Number of Packages: 1
Number of Projects: 1

Arrival Condition Summary

Shipping Container Sealed: Yes
Custody Seal Present: Yes
Custody Seal Intact: Yes
Samples Chilled: Yes
Paperwork Enclosed: Yes
Samples Intact: Yes
Missing Samples: No
Extra Samples: No
Discrepancy in Container Qty on COC: No
Sample IDs on COC match Containers: Yes
Sample Date/Time match COC: Yes
VOA Vial Headspace ≥ 6mm: N/A
VOA IDs (≥6mm): N/A

Total Trip Blank Qty: 0
Trip Blank Type: N/A
Air Quality Samples Present: No
Air Quality Flow Controllers Present: N/A
Flow Controller Quantity: 0
Air Quality Returns: N/A

Unpacked by Joseph Gruber (5200) at 11:52 on 06/20/2014

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp)
All Temperatures in °C.

<table>
<thead>
<tr>
<th>Cooler #</th>
<th>Thermometer ID</th>
<th>Corrected Temp</th>
<th>Therm Type</th>
<th>Ice Type</th>
<th>Ice Present?</th>
<th>Ice Container</th>
<th>Samples Collected Same Day as Receipt?</th>
<th>Elevated Temp?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DT131</td>
<td>2.2</td>
<td>DT</td>
<td>Wet</td>
<td>Y</td>
<td>Bagged</td>
<td>N</td>
<td>N</td>
</tr>
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</table>
Explanation of Symbols and Abbreviations

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

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>RL</td>
<td>Reporting Limit</td>
</tr>
<tr>
<td>N.D.</td>
<td>none detected</td>
</tr>
<tr>
<td>TNTC</td>
<td>Too Numerous To Count</td>
</tr>
<tr>
<td>IU</td>
<td>International Units</td>
</tr>
<tr>
<td>umhos/cm</td>
<td>micromhos/cm</td>
</tr>
<tr>
<td>°C</td>
<td>degrees Celsius</td>
</tr>
<tr>
<td>meq</td>
<td>milliequivalents</td>
</tr>
<tr>
<td>g</td>
<td>gram(s)</td>
</tr>
<tr>
<td>µg</td>
<td>microgram(s)</td>
</tr>
<tr>
<td>mL</td>
<td>milliliter(s)</td>
</tr>
<tr>
<td>m³</td>
<td>cubic meter(s)</td>
</tr>
<tr>
<td>ppm</td>
<td>parts per million</td>
</tr>
<tr>
<td>ppb</td>
<td>parts per billion</td>
</tr>
</tbody>
</table>

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

Data Qualifiers:

C – result confirmed by reanalysis.
J - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers
A TIC is a possible aldol-condensation product
B Analyte was also detected in the blank
C Pesticide result confirmed by GC/MS
D Compound quantitated on a diluted sample
E Concentration exceeds the calibration range of the instrument
N Presumptive evidence of a compound (TICs only)
P Concentration difference between primary and confirmation columns >25%
U Compound was not detected
X,Y,Z Defined in case narrative

Inorganic Qualifiers
B Value is <CRDL, but ≥IDL
E Estimated due to interference
M Duplicate injection precision not met
N Spike sample not within control limits
S Method of standard additions (MSA) used for calculation
U Compound was not detected
W Post digestion spike out of control limits
* Duplicate analysis not within control limits
+ 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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