Analysis Report

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ANALYTICAL RESULTS

Prepared by: Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 ExxonMobil PO Box 4592 Houston TX 77210-4592

March 12, 2015

Project: Mayflower, AR Pipeline Incident

Submittal Date: 03/04/2015 Group Number: 1542621 SDG: PEO57 PO Number: 4410272923 Release Number: SIXSMITH State of Sample Origin: AR

| Client Sample Description | Lancaster Labs (LL) # | | | | |
|--|-----------------------|--|--|--|--|
| WS-007(0.5-1.0)030315 Grab Surface Water | 7791580 | | | | |
| WS-009(Surface)030315 Grab Surface Water | 7791581 | | | | |
| WS-001(0.5-1.0)030315 Grab Surface Water | 7791582 | | | | |
| WS-021(Surface)030315 Grab Surface Water | 7791583 | | | | |
| WS-004(0.5-1.0)030315 Grab Surface Water | 7791584 | | | | |

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

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/.

| ELECTRONIC | ARCADIS | Attn: Stephen Barrick |
|------------|------------|--------------------------|
| COPY TO | | |
| ELECTRONIC | ARCADIS | Attn: Lyndi Mott |
| COPY TO | | |
| ELECTRONIC | ExxonMobil | Attn: Michael J. Firth |
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| ELECTRONIC | ARCADIS | Attn: Emily Leamer |
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| ELECTRONIC | ARCADIS | Attn: Rhiannon Parmelee |
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| ELECTRONIC | ExxonMobil | Attn: Michael L Sixsmith |
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ELECTRONIC COPY TO ARCADIS

Attn: Sonal Patil

COPY TO ELECTRONIC COPY TO

ARCADIS

Attn: Kim Abbott

Katherine a. Klinefelter

Respectfully Submitted,

Katherine A. Klinefelter Principal Specialist

(717) 556-7256



Project Name: Mayflower, AR Pipeline Incident LL Group #: 1542621

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:

No additional comments are necessary.



Analysis Report

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

Sample Description: WS-007(0.5-1.0)030315 Grab Surface Water

S20135565 Mayflower, AR

Pipeline Incident

LL Sample # WW 7791580 LL Group # 1542621 Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/03/2015 15:20 by ZP ExxonMobil PO Box 4592

Houston TX 77210-4592

Submitted: 03/04/2015 09:45 Reported: 03/12/2015 14:01

PE571 SDG#: PE057-01

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|------------|------------------------|------------|---------|----------------------------|--------------------------|--------------------|
| GC/MS | Semivolatiles SW-846 | 8270C SIM | ug/l | ug/l | ug/l | |
| 08357 | Acenaphthene | 83-32-9 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Acenaphthylene | 208-96-8 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Anthracene | 120-12-7 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Benzo(a)anthracene | 56-55-3 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Benzo(a)pyrene | 50-32-8 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Benzo(b) fluoranthene | 205-99-2 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Benzo(g,h,i)perylene | 191-24-2 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Benzo(k) fluoranthene | 207-08-9 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Chrysene | 218-01-9 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Fluoranthene | 206-44-0 | 0.016 J | 0.010 | 0.050 | 1 |
| 08357 | Fluorene | 86-73-7 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Naphthalene | 91-20-3 | N.D. | 0.030 | 0.060 | 1 |
| 08357 | Phenanthrene | 85-01-8 | N.D. | 0.030 | 0.060 | 1 |
| 08357 | Pyrene | 129-00-0 | N.D. | 0.010 | 0.050 | 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.

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Ti | me | Analyst | Dilution Factor |
|------------|-----------------------|------------------|--------|-------------|-------------------------|-------|------------------------|--------------------|
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 15068WAB026 | 03/11/2015 | 00:36 | Catherine E Bachman | 1 |
| 10470 | BNA Water Extraction | SW-846 3510C | 1 | 15068WAB026 | 03/09/2015 | 18:30 | Nicholas W Shroyer | 1 |



Analysis Report

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

Sample Description: WS-009(Surface)030315 Grab Surface Water

S20135565 Mayflower, AR

Pipeline Incident

LL Sample # WW 7791581 LL Group # 1542621

Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/03/2015 15:25 by ZP ExxonMobil

PO Box 4592

Houston TX 77210-4592

Submitted: 03/04/2015 09:45 Reported: 03/12/2015 14:01

PE572 SDG#: PE057-02

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|------------|------------------------|------------|--------|----------------------------|--------------------------|--------------------|
| GC/MS | Semivolatiles SW-846 | 8270C SIM | ug/l | ug/l | ug/l | |
| 08357 | Acenaphthene | 83-32-9 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Acenaphthylene | 208-96-8 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Anthracene | 120-12-7 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Benzo(a)anthracene | 56-55-3 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Benzo(a)pyrene | 50-32-8 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Benzo(b) fluoranthene | 205-99-2 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Benzo(g,h,i)perylene | 191-24-2 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Benzo(k)fluoranthene | 207-08-9 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Chrysene | 218-01-9 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Fluoranthene | 206-44-0 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Fluorene | 86-73-7 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.010 | 0.050 | 1 |
| 08357 | Naphthalene | 91-20-3 | N.D. | 0.030 | 0.060 | 1 |
| 08357 | Phenanthrene | 85-01-8 | N.D. | 0.030 | 0.060 | 1 |
| 08357 | Pyrene | 129-00-0 | N.D. | 0.010 | 0.050 | 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.

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Tir | me | Analyst | Dilution Factor |
|------------|-----------------------|------------------|--------|-------------|--------------------------|-------|------------------------|--------------------|
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 15068WAB026 | 03/11/2015 | 01:04 | Catherine E Bachman | 1 |
| 10470 | BNA Water Extraction | SW-846 3510C | 1 | 15068WAB026 | 03/09/2015 | 18:30 | Nicholas W Shroyer | 1 |



Analysis Report

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Sample Description: WS-001(0.5-1.0)030315 Grab Surface Water

S20135565 Mayflower, AR

Pipeline Incident

LL Sample # WW 7791582

LL Group # 1542621 Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/03/2015 15:35 by ZP ExxonMobil PO Box 4592

Houston TX 77210-4592

Submitted: 03/04/2015 09:45 Reported: 03/12/2015 14:01

PE573 SDG#: PE057-03

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|------------|------------------------|------------|--------|----------------------------|--------------------------|--------------------|
| GC/MS | Semivolatiles SW-846 | 8270C SIM | ug/l | ug/l | ug/l | |
| 08357 | Acenaphthene | 83-32-9 | N.D. | 0.010 | 0.051 | 1 |
| 08357 | Acenaphthylene | 208-96-8 | N.D. | 0.010 | 0.051 | 1 |
| 08357 | Anthracene | 120-12-7 | N.D. | 0.010 | 0.051 | 1 |
| 08357 | Benzo(a)anthracene | 56-55-3 | N.D. | 0.010 | 0.051 | 1 |
| 08357 | Benzo(a)pyrene | 50-32-8 | N.D. | 0.010 | 0.051 | 1 |
| 08357 | Benzo(b) fluoranthene | 205-99-2 | N.D. | 0.010 | 0.051 | 1 |
| 08357 | Benzo(g,h,i)perylene | 191-24-2 | N.D. | 0.010 | 0.051 | 1 |
| 08357 | Benzo(k)fluoranthene | 207-08-9 | N.D. | 0.010 | 0.051 | 1 |
| 08357 | Chrysene | 218-01-9 | N.D. | 0.010 | 0.051 | 1 |
| 08357 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.010 | 0.051 | 1 |
| 08357 | Fluoranthene | 206-44-0 | N.D. | 0.010 | 0.051 | 1 |
| 08357 | Fluorene | 86-73-7 | N.D. | 0.010 | 0.051 | 1 |
| 08357 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.010 | 0.051 | 1 |
| 08357 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.010 | 0.051 | 1 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.010 | 0.051 | 1 |
| 08357 | Naphthalene | 91-20-3 | N.D. | 0.031 | 0.061 | 1 |
| 08357 | Phenanthrene | 85-01-8 | N.D. | 0.031 | 0.061 | 1 |
| 08357 | Pyrene | 129-00-0 | N.D. | 0.010 | 0.051 | 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.

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Tir | me | Analyst | Dilution Factor |
|------------|-----------------------|------------------|--------|-------------|--------------------------|-------|-------------------------------|--------------------|
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 15068WAB026 | 03/11/2015 | 01:31 | Catherine E | 1 |
| 10470 | BNA Water Extraction | SW-846 3510C | 1 | 15068WAB026 | 03/09/2015 | 18:30 | Bachman Nicholas W Shroyer | 1 |



Analysis Report

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Sample Description: WS-021(Surface)030315 Grab Surface Water

S20135565 Mayflower, AR

Pipeline Incident

LL Sample # WW 7791583

LL Group # 1542621 Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/03/2015 15:40 by ZP ExxonMobil PO Box 4592

Houston TX 77210-4592

Submitted: 03/04/2015 09:45 Reported: 03/12/2015 14:01

PE574 SDG#: PE057-04

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|------------|------------------------|------------|--------|----------------------------|--------------------------|--------------------|
| GC/MS | Semivolatiles SW-846 | 8270C SIM | ug/l | ug/l | ug/l | |
| 08357 | Acenaphthene | 83-32-9 | N.D. | 0.010 | 0.052 | 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 | 0.063 | 1 |
| 08357 | Phenanthrene | 85-01-8 | N.D. | 0.031 | 0.063 | 1 |
| 08357 | Pyrene | 129-00-0 | N.D. | 0.010 | 0.052 | 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.

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Tir | ne | Analyst | Dilution Factor |
|------------|-----------------------|------------------|--------|-------------|--------------------------|-------|-------------------------------|--------------------|
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 15068WAB026 | 03/11/2015 | 01:59 | Catherine E | 1 |
| 10470 | BNA Water Extraction | SW-846 3510C | 1 | 15068WAB026 | 03/09/2015 | 18:30 | Bachman Nicholas W Shroyer | 1 |



Analysis Report

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Sample Description: WS-004(0.5-1.0)030315 Grab Surface Water

S20135565 Mayflower, AR

Pipeline Incident

LL Sample # WW 7791584

LL Group # 1542621 Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/03/2015 15:45 by ZP ExxonMobil

PO Box 4592

Houston TX 77210-4592

Submitted: 03/04/2015 09:45 Reported: 03/12/2015 14:01

PE575 SDG#: PE057-05

| CAT No. | Analysis Name | CAS Number | Result | | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|------------|------------------------|------------|--------|---|----------------------------|--------------------------|--------------------|
| GC/MS | Semivolatiles SW-846 | 8270C SIM | ug/l | | ug/l | ug/l | |
| 08357 | Acenaphthene | 83-32-9 | N.D. | | 0.010 | 0.051 | 1 |
| 08357 | Acenaphthylene | 208-96-8 | N.D. | | 0.010 | 0.051 | 1 |
| 08357 | Anthracene | 120-12-7 | N.D. | | 0.010 | 0.051 | 1 |
| 08357 | Benzo(a)anthracene | 56-55-3 | N.D. | | 0.010 | 0.051 | 1 |
| 08357 | Benzo(a)pyrene | 50-32-8 | N.D. | | 0.010 | 0.051 | 1 |
| 08357 | Benzo(b) fluoranthene | 205-99-2 | 0.020 | J | 0.010 | 0.051 | 1 |
| 08357 | Benzo(g,h,i)perylene | 191-24-2 | 0.030 | J | 0.010 | 0.051 | 1 |
| 08357 | Benzo(k)fluoranthene | 207-08-9 | N.D. | | 0.010 | 0.051 | 1 |
| 08357 | Chrysene | 218-01-9 | 0.013 | J | 0.010 | 0.051 | 1 |
| 08357 | Dibenz(a,h)anthracene | 53-70-3 | 0.022 | J | 0.010 | 0.051 | 1 |
| 08357 | Fluoranthene | 206-44-0 | 0.019 | J | 0.010 | 0.051 | 1 |
| 08357 | Fluorene | 86-73-7 | N.D. | | 0.010 | 0.051 | 1 |
| 08357 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.025 | J | 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 | 0.061 | 1 |
| 08357 | Phenanthrene | 85-01-8 | N.D. | | 0.030 | 0.061 | 1 |
| 08357 | Pyrene | 129-00-0 | 0.011 | J | 0.010 | 0.051 | 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.

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Ti | me | Analyst | Dilution Factor |
|------------|-----------------------|------------------|--------|-------------|-------------------------|-------|------------------------|--------------------|
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 15068WAB026 | 03/11/2015 | 02:26 | Catherine E Bachman | 1 |
| 10470 | BNA Water Extraction | SW-846 3510C | 1 | 15068WAB026 | 03/09/2015 | 18:30 | Nicholas W Shroyer | 1 |



Analysis Report

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Quality Control Summary

Client Name: ExxonMobil Group Number: 1542621

Reported: 03/12/2015 14:01

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

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

Laboratory Compliance Quality Control

| Analysis Name | Blank <u>Result</u> | Blank MDL** | Blank <u>LOQ</u> | Report <u>Units</u> | LCS %REC | LCSD %REC | LCS/LCSD <u>Limits</u> | RPD | RPD <u>Max</u> |
|---------------------------|------------------------|----------------|---------------------|------------------------|-------------|--------------|---------------------------|-----|-------------------|
| Batch number: 15068WAB026 | Sample numb | er(s): 77 | 91580-7791 | 1584 | | | | | |
| Acenaphthene | N.D. | 0.010 | 0.050 | ug/l | 89 | | 76-139 | | |
| Acenaphthylene | N.D. | 0.010 | 0.050 | ug/l | 85 | | 67-120 | | |
| Anthracene | N.D. | 0.010 | 0.050 | ug/l | 94 | | 72-128 | | |
| Benzo(a) anthracene | N.D. | 0.010 | 0.050 | ug/l | 95 | | 71-127 | | |
| Benzo(a)pyrene | N.D. | 0.010 | 0.050 | ug/l | 91 | | 64-132 | | |
| Benzo(b)fluoranthene | N.D. | 0.010 | 0.050 | ug/l | 108 | | 71-139 | | |
| Benzo(g,h,i)perylene | N.D. | 0.010 | 0.050 | ug/l | 96 | | 49-140 | | |
| Benzo(k) fluoranthene | N.D. | 0.010 | 0.050 | ug/l | 97 | | 63-136 | | |
| Chrysene | N.D. | 0.010 | 0.050 | ug/l | 93 | | 72-132 | | |
| Dibenz(a,h)anthracene | N.D. | 0.010 | 0.050 | ug/l | 94 | | 37-142 | | |
| Fluoranthene | N.D. | 0.010 | 0.050 | ug/l | 93 | | 76-121 | | |
| Fluorene | N.D. | 0.010 | 0.050 | ug/l | 90 | | 71-124 | | |
| Indeno(1,2,3-cd)pyrene | N.D. | 0.010 | 0.050 | ug/l | 95 | | 45-136 | | |
| 1-Methylnaphthalene | N.D. | 0.010 | 0.050 | ug/l | 92 | | 65-122 | | |
| 2-Methylnaphthalene | N.D. | 0.010 | 0.050 | ug/l | 87 | | 59-124 | | |
| Naphthalene | N.D. | 0.030 | 0.060 | ug/l | 90 | | 69-119 | | |
| Phenanthrene | N.D. | 0.030 | 0.060 | ug/l | 91 | | 75-121 | | |
| Pyrene | N.D. | 0.010 | 0.050 | ug/l | 90 | | 70-124 | | |

Sample Matrix Quality Control

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

| Analysis Name | MS %REC | MSD %REC | MS/MSD <u>Limits</u> | RPD | RPD <u>MAX</u> | BKG Conc | DUP Conc | DUP RPD | Dup RPD <u>Max</u> |
|---------------------------|------------|-------------|-------------------------|---------|-------------------|-------------|-------------|------------|-----------------------|
| Batch number: 15068WAB026 | Sample | number(s) | : 7791580 | -779158 | 34 UNSP | K: P791593 | | | |
| Acenaphthene | 91 | 91 | 69-134 | 1 | 30 | | | | |
| Acenaphthylene | 86 | 86 | 66-132 | 1 | 30 | | | | |
| Anthracene | 97 | 93 | 64-129 | 5 | 30 | | | | |
| Benzo(a)anthracene | 97 | 95 | 32-151 | 3 | 30 | | | | |
| Benzo(a)pyrene | 93 | 89 | 32-137 | 5 | 30 | | | | |
| Benzo(b)fluoranthene | 111 | 106 | 41-137 | 5 | 30 | | | | |
| Benzo(g,h,i)perylene | 96 | 90 | 21-127 | 7 | 30 | | | | |
| Benzo(k)fluoranthene | 95 | 96 | 36-139 | 1 | 30 | | | | |
| Chrysene | 94 | 91 | 51-129 | 4 | 30 | | | | |
| Dibenz(a,h)anthracene | 101 | 93 | 17-134 | 9 | 30 | | | | |
| Fluoranthene | 95 | 93 | 49-138 | 2 | 30 | | | | |
| Fluorene | 92 | 91 | 59-137 | 2 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 98 | 92 | 26-130 | 7 | 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.

Analysis Report

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Quality Control Summary

Client Name: ExxonMobil Group Number: 1542621

Reported: 03/12/2015 14:01

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

| | MS | MSD | MS/MSD | | RPD | BKG | DUP | DUP | Dup RPD |
|---------------------|------|------|---------------|-----|-----|------|------|------------|---------|
| Analysis Name | %REC | %REC | <u>Limits</u> | RPD | MAX | Conc | Conc | <u>RPD</u> | Max |
| 1-Methylnaphthalene | 95 | 93 | 47-136 | 3 | 30 | | | | |
| 2-Methylnaphthalene | 89 | 87 | 66-120 | 3 | 30 | | | | |
| Naphthalene | 92 | 90 | 58-131 | 3 | 30 | | | | |
| Phenanthrene | 93 | 90 | 66-126 | 3 | 30 | | | | |
| Pyrene | 92 | 89 | 37-142 | 4 | 30 | | | | |

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: 15068WAB026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene- |
|---------|------------------|--------------------|----------------------|
| | | | d10 |
| 7791580 | 77 | 46 | 75 |
| 7791581 | 84 | 72 | 77 |
| 7791582 | 95 | 94 | 83 |
| 7791583 | 95 | 89 | 85 |
| 7791584 | 92 | 86 | 81 |
| Blank | 107 | 120 | 98 |
| LCS | 100 | 114 | 94 |
| MS | 100 | 114 | 96 |
| MSD | 99 | 111 | 93 |
| Limits: | 56-134 | 26-158 | 52-127 |

^{*-} 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.

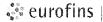
ExxonMobil Analysis Request/Chain of Custody

| 9.0 | | | | - | |
|-----|----|----|---|----|----|
| | eı | JI | 0 | tı | ns |

Lancaster Laboratories Environmental

| Acct.# | 14739 | For Eurofins Lancaster Laboratories Environmental use only Group # [54262] Sample # 7791580-84 | |
|--------|-------|--|--|
| | • | Instructions on reverse side correspond with circled numbers. | |

| 1) Client Inf | ormation | | | (4) | Matrix | | | 5 | | | | es Re | | | S = 3 × 6 7 × 7 × 7 × 7 × 7 × 7 × 7 × 7 × 7 × | | SCE | R#: <u>[[</u> | 59 | 21. |
|--|--------------------------------|----------------------------------|---|--|-------------------|-------|-----------------------|--------------------|----|-----------------|----------|--|--|---------|---|---------|------|--|--|---------------------------------------|
| Facility #/SID | 1 4 | | | Marie Comments | | | | | | F | rese | rvatio | n Co | de | | | 001 | . , | | |
| Site Address | dan L | | | _ | | | | | | | - | | _ | | | | | Preserva = HCI | | |
| Mensflower Roelness Inch Site Address Mingflower AC ExxonMobil PM | | | | | Ground Surface X | | | | | | | | | | | | i | = HC = HNO ₃ | 1 = 1 B = N | hiosulfate aOH |
| ExxonMobil PM | Cost Center/AFE | | | | Ground | | | | | | | | | | | | | = H ₂ SO ₄ | 0 = 0 | |
| Mike Syx Symith Consultant/Office | | | | _ ± | g Su | | | | | | | | | | | | 6 | Re | marks | |
| | | | | Sediment | | | Sits | | | | | | | | | | | | | |
| Consultant PM | Consultant Phone # | | | | | Air | aine | 18 | | | | | | | | | | | | |
| Steve Berosk Sampler Lac Powers | | _ | | | Potable NPDES | | Total # of Containers | S/M | | | | | | | | | | | | |
| Sampler | | | 3 : | | g A | _ | ζ C | 8270 | | | | | | 1 | | | | | | |
| The Powers | | | | | <u></u> | | # | 20 | | | | | | | | | | | | |
| 2) Sample Identification | Colle- Date | Time | Grab | Soil | Water | ē | ota | PAE | | | | | | | | | | | | |
| WS-007 (0.5-1.0)030315 | | 1520 | $\frac{0}{V}$ |) 0) | X | | 2 | X | | | | | | _ | | | | | | |
| W5-009 (50-90CC) 030315 | | 1525 | X | | | | 2 | X | | - | | | + | + | 1 | | | | | |
| WS-901(0.5-1.0) 030315 | | 535 | $\hat{\mathbf{x}}$ | | | | 2 | | | | \dashv | _ | | 1 | 1 | | | | | |
| W4-021 (Surface) 030315 | | 1540 | | 1 | $\downarrow \chi$ | | 2 | | | | | | | | | | | ALE EXPLORESTED THE ATTENDED TO A STATE OF THE A | | |
| WS-004(0,5-10)030315 | | | /Y | | V | | 2 | $\hat{\mathbf{x}}$ | | | | | 1 | | 1 | | | | ************************************* | |
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| | | | | | | | | | | | | | | | | | | ************************************** | | 31.12 |
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| | | | *************************************** | | | | | | | | | | | | | | | | | |
| 7) Turnarou nd Tim e Requested (TA | T) (please circle) | Relinquished I | by 🛭 | es/ | 1 | | Date | - 1 | | Time | \ | | ceived | by / | | | _ | Date | | ime (9 |
| Standard 5 day | 4 day | Relinquished I Relinquished I | 2 <u>13 .</u> | [1][0 | 2196me | ¥. | Date | 5/1 | 5 | /3 Time | 30 |) (* | ceived | by | NAME OF TAXABLE PARTY. | | | 3/3 ₇ | | 0900 |
| | | 76 | | A DISCOURAGE STATE OF THE PARTY | 0 | V | 3/ | 2/ | 15 | 170 | | | · · · · · | · /) | 04 | , 1 | | | | |
| 72 hour 48 hour | 24 hour | Relinquished t | by | | | | Date | 4 ' | | Time | | | ceived | by | / | | | Date | 7 | ime |
| 8 Data Package (circle if required) | DD (circle if required) | | | | | | | ans weeks some | | | | | | | | | | | | |
| | ocus EIM (default) | | by Comi | | | | | | | | | Pe | coived | by L | 1 | _ | | Date 3 | | ime |
| Type VI (Raw Data) | ther | UPS_ | <u>X</u> | | edEx | | | her_ | | | | _ | K. | | | | | 1/14/ |) (| (17) |
| NJ Reduced Other | | / | Tem | oeratu | re Upon R | eceip | t <u>2</u> | 4 | | °C | | The state of the s | Cı | ustody | / Sea | ls Inta | act? | Ve | 2) | No |
| Outer | | | | | | | restation of | Marie San Sin (mar | | the sention are | | | A CONTRACTOR OF THE PARTY OF TH | | | | | | | |



Sample Administration Receipt Documentation Log

Doc Log ID:

58778

Group Number(s): 1542621

Client: EXXONMOBIL

MAYFLOWER PIPELINE INCIDENT

Delivery and Receipt Information

Delivery Method:

<u>UPS</u>

Arrival Timestamp:

03/04/2015 9:45

Number of Packages:

1

Number of Projects:

1

State/Province of Origin:

AR

Arrival Condition Summary

Shipping Container Sealed:

Yes

Sample IDs on COC match Containers:

Yes

Custody Seal Present:

Yes

Sample Date/Times match COC:

Yes

Custody Seal Intact:

Yes

VOA Vial Headspace ≥ 6mm:

N/A

Samples Chilled:

Yes

Total Trip Blank Qty:

0

Paperwork Enclosed:

Yes

Air Quality Samples Present:

No

Samples Intact:

Yes No

Missing Samples:

Extra Samples:

No No

Unpacked by Corey Eshleman (3647) at 10:48 on 03/04/2015

Samples Chilled Details: MAYFLOWER PIPELINE INCIDENT

Thermometer Types:

DT = Digital (Temp. Bottle)

IR = Infrared (Surface Temp)

All Temperatures in °C.

Cooler # Thermometer ID DT121

1

Corrected Temp 2.1

Discrepancy in Container Qty on COC:

Therm. Type DT

Ice Type Wet

Ice Present?

Ice Container Bagged

Elevated Temp?

Page 1 of 1



Explanation of Symbols and Abbreviations

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

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

less than <

greater than

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

ppb parts per billion

Results printed under this heading have been adjusted for moisture content. This increases the analyte weight Dry weight basis

concentration to approximate the value present in a similar sample without moisture. All other results are reported on an

as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank

C - Result confirmed by reanalysis

E - Concentration exceeds the calibration range

J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and the < Limit of Quantitation (LOQ or RL)

P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.

U - Analyte was not detected at the value indicated

V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) 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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