ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ExxonMobil
PO Box 4592
Houston TX 77210-4592

March 24, 2015

Project: Mayflower, AR Pipeline Incident

Submittal Date: 03/18/2015
Group Number: 1546116
SDG: PEO59
PO Number: 4410272923
Release Number: SIXSMITH
State of Sample Origin: AR

Client Sample Description	Lancaster Labs (LL) #
WS-007(0.5-1.0)031715 Grab Surface Water	7809371
WS-007(0.5-1.0)031715MS Grab Surface Water	7809372
WS-007(0.5-1.0)031715MSD Grab Surface Water	7809373
WS-009(Surface)031715 Grab Surface Water	7809374
WS-001(0.5-1.0)031715 Grab Surface Water	7809375
WS-021(Surface)031715 Grab Surface Water	7809376
WS-004(0.5-1.0)031715 Grab Surface Water	7809377
DUP-WS-141-031715 Grab Surface Water	7809378

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/ .

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Respectfully Submitted,

Katherine A. Klinefelter

Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LL Group #: 1546116

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 #: 15078WAO026 (Sample number(s): 7809371-7809378 UNSPK: 7809371)

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside outside acceptance windows: Phenanthrene, Fluoranthene

Sample Description: WS-007(0.5-1.0)031715 Grab Surface Water
S20135565 Mayflower, AR
Pipeline Incident

LL Sample # WW 7809371
LL Group # 1546116
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/17/2015 14:40 by ZP

Submitted: 03/18/2015 10:20
Reported: 03/24/2015 13:19

ExxonMobil
PO Box 4592
Houston TX 77210-4592

17007 SDG#: PEO59-01BKG

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	0.016	J	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	0.013	J	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	0.026	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	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	0.062	1
08357	Phenanthrene	85-01-8	N.D.		0.031	0.062	1
08357	Pyrene	129-00-0	0.018	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.

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	15078WAO026	03/22/2015 12:06	Holly B Ziegler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	15078WAO026	03/21/2015 09:00	Seth A Farrier	1

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

Sample Description: WS-007(0.5-1.0)031715MS Grab Surface Water
S20135565 Mayflower, AR
Pipeline Incident

LL Sample # WW 7809372
LL Group # 1546116
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/17/2015 14:40 by ZP

Submitted: 03/18/2015 10:20
Reported: 03/24/2015 13:19

ExxonMobil
PO Box 4592
Houston TX 77210-4592

17007 SDG#: PEO59-01MS

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	1.2	0.013	0.064	1
08357	Acenaphthylene	208-96-8	1.2	0.013	0.064	1
08357	Anthracene	120-12-7	1.1	0.013	0.064	1
08357	Benzo(a)anthracene	56-55-3	1.3	0.013	0.064	1
08357	Benzo(a)pyrene	50-32-8	1.1	0.013	0.064	1
08357	Benzo(b)fluoranthene	205-99-2	1.2	0.013	0.064	1
08357	Benzo(g,h,i)perylene	191-24-2	1.0	0.013	0.064	1
08357	Benzo(k)fluoranthene	207-08-9	1.1	0.013	0.064	1
08357	Chrysene	218-01-9	1.1	0.013	0.064	1
08357	Dibenz(a,h)anthracene	53-70-3	1.0	0.013	0.064	1
08357	Fluoranthene	206-44-0	1.2	0.013	0.064	1
08357	Fluorene	86-73-7	1.2	0.013	0.064	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	1.1	0.013	0.064	1
08357	1-Methylnaphthalene	90-12-0	1.1	0.013	0.064	1
08357	2-Methylnaphthalene	91-57-6	1.2	0.013	0.064	1
08357	Naphthalene	91-20-3	1.2	0.038	0.077	1
08357	Phenanthrene	85-01-8	1.3	0.038	0.077	1
08357	Pyrene	129-00-0	1.1	0.013	0.064	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
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	15078WAO026	03/22/2015 12:34	Holly B Ziegler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	15078WAO026	03/21/2015 09:00	Seth A Farrier	1

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

Sample Description: WS-007(0.5-1.0)031715MSD Grab Surface Water
S20135565 Mayflower, AR
Pipeline Incident

LL Sample # WW 7809373
LL Group # 1546116
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/17/2015 14:40 by ZP

Submitted: 03/18/2015 10:20
Reported: 03/24/2015 13:19

ExxonMobil
PO Box 4592
Houston TX 77210-4592

17007 SDG#: PEO59-01MSD

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	0.95	0.010	0.051	1
08357	Acenaphthylene	208-96-8	0.91	0.010	0.051	1
08357	Anthracene	120-12-7	0.84	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	0.84	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.92	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.83	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.87	0.010	0.051	1
08357	Chrysene	218-01-9	0.91	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	0.85	0.010	0.051	1
08357	Fluoranthene	206-44-0	0.84	0.010	0.051	1
08357	Fluorene	86-73-7	0.96	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	0.96	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	1.0	0.010	0.051	1
08357	Naphthalene	91-20-3	0.96	0.031	0.062	1
08357	Phenanthrene	85-01-8	0.92	0.031	0.062	1
08357	Pyrene	129-00-0	0.86	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.

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	15078WAO026	03/22/2015 13:02	Holly B Ziegler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	15078WAO026	03/21/2015 09:00	Seth A Farrier	1

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

Sample Description: WS-009(Surface)031715 Grab Surface Water
S20135565 Mayflower, AR
Pipeline Incident

LL Sample # WW 7809374
LL Group # 1546116
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/17/2015 14:45 by ZP

Submitted: 03/18/2015 10:20
Reported: 03/24/2015 13:19

ExxonMobil
PO Box 4592
Houston TX 77210-4592

17009 SDG#: PEO59-02

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.		0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.		0.011	0.053	1
08357	Anthracene	120-12-7	N.D.		0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.		0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.		0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	0.013	J	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	0.048	J	0.011	0.053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.		0.011	0.053	1
08357	Chrysene	218-01-9	N.D.		0.011	0.053	1
08357	Dibenz(a,h)anthracene	53-70-3	0.037	J	0.011	0.053	1
08357	Fluoranthene	206-44-0	0.011	J	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.		0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.041	J	0.011	0.053	1
08357	1-Methylnaphthalene	90-12-0	N.D.		0.011	0.053	1
08357	2-Methylnaphthalene	91-57-6	N.D.		0.011	0.053	1
08357	Naphthalene	91-20-3	N.D.		0.032	0.063	1
08357	Phenanthrene	85-01-8	N.D.		0.032	0.063	1
08357	Pyrene	129-00-0	N.D.		0.011	0.053	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
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	15078WAO026	03/22/2015 13:29	Holly B Ziegler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	15078WAO026	03/21/2015 09:00	Seth A Farrier	1

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

Sample Description: WS-001(0.5-1.0)031715 Grab Surface Water
S20135565 Mayflower, AR
Pipeline Incident

LL Sample # WW 7809375
LL Group # 1546116
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/17/2015 14:55 by ZP

Submitted: 03/18/2015 10:20
Reported: 03/24/2015 13:19

ExxonMobil
PO Box 4592
Houston TX 77210-4592

17001 SDG#: PEO59-03

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	0.052	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	0.012 J	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	0.062	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.062	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.

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	15078WAO026	03/22/2015 13:57	Holly B Ziegler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	15078WAO026	03/21/2015 09:00	Seth A Farrier	1

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

Sample Description: WS-021(Surface)031715 Grab Surface Water
S20135565 Mayflower, AR
Pipeline Incident

LL Sample # WW 7809376
LL Group # 1546116
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/17/2015 15:00 by ZP

Submitted: 03/18/2015 10:20
Reported: 03/24/2015 13:19

ExxonMobil
PO Box 4592
Houston TX 77210-4592

17021 SDG#: PEO59-04

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	0.051	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	0.011 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	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	0.062	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.062	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.

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	15078WAO026	03/22/2015 14:25	Holly B Ziegler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	15078WAO026	03/21/2015 09:00	Seth A Farrier	1

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

Sample Description: WS-004(0.5-1.0)031715 Grab Surface Water
S20135565 Mayflower, AR
Pipeline Incident

LL Sample # WW 7809377
LL Group # 1546116
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/17/2015 15:05 by ZP

Submitted: 03/18/2015 10:20
Reported: 03/24/2015 13:19

ExxonMobil
PO Box 4592
Houston TX 77210-4592

17004 SDG#: PEO59-05

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	0.052	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	0.015	J	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	0.014	J	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	0.019	J	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	0.062	1
08357	Phenanthrene	85-01-8	N.D.		0.031	0.062	1
08357	Pyrene	129-00-0	0.015	J	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.

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	15078WAO026	03/22/2015 14:52	Holly B Ziegler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	15078WAO026	03/21/2015 09:00	Seth A Farrier	1

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

Sample Description: DUP-WS-141-031715 Grab Surface Water
S20135565 Mayflower, AR
Pipeline Incident

LL Sample # WW 7809378
LL Group # 1546116
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/17/2015

Submitted: 03/18/2015 10:20
Reported: 03/24/2015 13:19

ExxonMobil
PO Box 4592
Houston TX 77210-4592

17141 SDG#: PEO59-06FD

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	0.012	J	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	0.020	J	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	0.032	J	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	0.011	J	0.010	0.052	1
08357	Chrysene	218-01-9	0.013	J	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	0.022	J	0.010	0.052	1
08357	Fluoranthene	206-44-0	0.028	J	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	0.028	J	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	0.017	J	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.

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	15078WAO026	03/22/2015 15:20	Holly B Ziegler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	15078WAO026	03/21/2015 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: 1546116
Reported: 03/24/2015 13:19

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

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

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 15078WAO026	Sample number(s): 7809371-7809378								
Acenaphthene	N.D.	0.010	0.050	ug/l	94		76-139		
Acenaphthylene	N.D.	0.010	0.050	ug/l	91		67-120		
Anthracene	N.D.	0.010	0.050	ug/l	99		72-128		
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	94		71-127		
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	93		64-132		
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	101		71-139		
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	93		49-140		
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	96		63-136		
Chrysene	N.D.	0.010	0.050	ug/l	95		72-132		
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	84		37-142		
Fluoranthene	N.D.	0.010	0.050	ug/l	98		76-121		
Fluorene	N.D.	0.010	0.050	ug/l	94		71-124		
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	88		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	96		59-124		
Naphthalene	N.D.	0.030	0.060	ug/l	95		69-119		
Phenanthrene	N.D.	0.030	0.060	ug/l	95		75-121		
Pyrene	N.D.	0.010	0.050	ug/l	91		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 Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 15078WAO026	Sample number(s): 7809371-7809378 UNSPK: 7809371								
Acenaphthene	93	92	69-134	23	30				
Acenaphthylene	90	89	66-132	24	30				
Anthracene	89	82	64-129	30	30				
Benzo(a)anthracene	98	98	32-151	22	30				
Benzo(a)pyrene	83	82	32-137	23	30				
Benzo(b)fluoranthene	90	88	41-137	23	30				
Benzo(g,h,i)perylene	82	81	21-127	23	30				
Benzo(k)fluoranthene	86	85	36-139	23	30				
Chrysene	88	87	51-129	23	30				
Dibenz(a,h)anthracene	81	82	17-134	20	30				
Fluoranthene	88	79	49-138	31*	30				
Fluorene	94	93	59-137	22	30				
Indeno(1,2,3-cd)pyrene	82	82	26-130	22	30				

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

Quality Control Summary

Client Name: ExxonMobil Group Number: 1546116
Reported: 03/24/2015 13:19

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
1-Methylnaphthalene	89	93	47-136	18	30				
2-Methylnaphthalene	96	100	66-120	18	30				
Naphthalene	90	93	58-131	19	30				
Phenanthrene	99	90	66-126	32*	30				
Pyrene	86	82	37-142	26	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: 15078WAO026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7809371	79	94	81
7809372	84	99	84
7809373	79	96	88
7809374	80	88	78
7809375	92	87	80
7809376	80	88	75
7809377	88	86	73
7809378	91	91	79
Blank	89	101	76
LCS	94	106	87
MS	84	99	84
MSD	79	96	88
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

eurofins | Lancaster Laboratories Environmental

Acct. # 14739 | For Eurofins Lancaster Laboratories Environmental use only | Group # 1546116 | Sample # 7809371-78

Instructions on reverse side correspond with circled numbers.

SCR#: 165932

1 Client Information

Facility #/SID: Mayflower Pipeline Incident

Site Address: Mayflower, AR

ExxonMobil PM: Mike Sixsmith

Cost Center/AFE:

Consultant/Office: Arcadis

Consultant PM: Steve Barrock

Consultant Phone #:

Sampler: Zac Powers

4 Matrix

Sediment ☐ | Soil ☐ | Ground ☐ | Potable ☐ | Surface ☒ | NPDES ☐ | Water | Air ☐ | Oil ☐

5 Analyses Requested

Preservation Code

Preservation Codes

H = HCl | T = Thiosulfate
N = HNO_3 | B = NaOH
S = H_2SO_4 | O = Other

6 Remarks

2 Sample Identification	Collected Date	Collected Time	3 Grab	Composite	Total # of Containers	PAH 8270 SIM
WS-007(0.5-1.0)031715	3.17.15	1440	X		2	X
WS-007(0.5-1.0)031715 MS/MSD	3.17.15	1440	X		4	X
WS-009(Surface)031715	3.17.15	1445	X		2	X
WS-001(0.5-1.0)031715	3.17.15	1455	X		2	X
WS-021(Surface)031715	3.17.15	1500	X		2	X
WS-004(0.5-1.0)031715	3.17.15	1505	X		2	X
DUP-WS-141-031715	3.17.15	—	X		2	X

7 Turnaround Time Requested (TAT) (please circle)

Standard | 5 day | 4 day | 72 hour | 48 hour | 24 hour

8 Data Package (circle if required)

Type I - Full
Type VI (Raw Data)
NJ Reduced
Other

EDD (circle if required)

Locus EIM (default)
Other

Relinquished by	Date	Time	Received by	Date	Time
	3-2-15	0930	Z Powers	3-17-15	0900
	3.17.15	1700	UPS		
Relinquished by Commercial Carrier: UPS ☒ FedEx ☐ Other				3.18.15	1020

Temperature Upon Receipt 1.2 °C

Custody Seals Intact? Yes / No

9

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 61195

Group Number(s): 1546116

Client: ExxonMobil

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	03/18/2015 10:20
Number of Packages:	1	Number of Projects:	1

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		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Timothy Cubberley (6520) at 14:04 on 03/18/2015

Samples Chilled Details

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

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.2	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T 717 656 2300
F 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

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

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

<	less than
>	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
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.

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.

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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