Analysis Report

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

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

February 26, 2014

Project: Mayflower, AR Pipeline Incident

Submittal Date: 02/14/2014 Group Number: 1452685 SDG: PEM85 PO Number: 4410181435 Release Number: SIXSMITH State of Sample Origin: AR

Client Sample Description	Lancaster Labs (LL) #
WS-011(1.5-2.0)021314 Grab Surface Water	7364412
WS-011(6.0-6.5)021314 Grab Surface Water	7364413
WS-014(1.5-2.0)021314 Grab Surface Water	7364414
WS-014(5.5-6.0)021314 Grab Surface Water	7364415
WS-015(1.5-2.0)021314 Grab Surface Water	7364416
WS-015(3.5-4.0)021314 Grab Surface Water	7364417
WS-012(1.5-2.0)021314 Grab Surface Water	7364418
WS-012(5.0-5.5)021314 Grab Surface Water	7364419
WS-010(1.5-2.0)021314 Grab Surface Water	7364420
WS-010(3.5-4.0)021314 Grab Surface Water	7364421
WS-006(0.5-1.0)021314 Grab Surface Water	7364422
WS-006(0.5-1.0)021314MS Grab Surface Water	7364423
WS-006(0.5-1.0)021314MSD Grab Surface Water	7364424
DUP-WS-124-021314 Grab Surface Water	7364425

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

ELECTRONIC	ARCADIS	Attn: Stephen Barrick
COPY TO		
ELECTRONIC	ARCADIS	Attn: Lyndi Mott
COPY TO		•
ELECTRONIC	ExxonMobil	Attn: Michael J. Firth
COPY TO		
ELECTRONIC	ARCADIS	Attn: Emily Leamer
COPY TO		,
ELECTRONIC	ARCADIS	Attn: Rhiannon Parmalee
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ExxonMobil

Attn: Michael L Sixsmith

Attn: Julie Foster

Katherine a. Klinefelter

Respectfully Submitted,

Katherine A. Klinefelter Principal Specialist

(717) 556-7256

Case Narrative

Project Name: Mayflower, AR Pipeline Incident LLI Group #: 1452685

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

<u>Sample #s: 7364414, 7364416, 7364417</u>

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 #: 14046WAI026 (Sample number(s): 7364412-7364425 UNSPK: 7364422)

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside outside acceptance windows: Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7364414, 7364416, 7364417



Analysis Report

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Sample Description: WS-011(1.5-2.0)021314 Grab Surface Water

S20135565 Mayflower, AR

Pipeline Incident

LL Sample # WW 7364412

LL Group # 1452685 Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 02/13/2014 13:25 by DF ExxonMobil PO Box 4592

Houston TX 77210-4592

Submitted: 02/14/2014 10:00 Reported: 02/26/2014 14:07

P8508 SDG#: PEM85-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received 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	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	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	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	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	N.D.	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	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	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.

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	14046WAI026	02/21/2014	23:48	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14046WAI026	02/17/2014	09:45	Anna E Stager	1



Analysis Report

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Sample Description: WS-011(6.0-6.5)021314 Grab Surface Water

LL Sample # WW 7364413 S20135565 Mayflower, AR LL Group # 1452685 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 02/13/2014 13:35 by DF ExxonMobil PO Box 4592

Submitted: 02/14/2014 10:00 Houston TX 77210-4592

Reported: 02/26/2014 14:07

P8509 SDG#: PEM85-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received 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	0.051	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

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	14046WAI026	02/22/2014	00:15	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14046WAI026	02/17/2014	09:45	Anna E Stager	1



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Sample Description: WS-014(1.5-2.0)021314 Grab Surface Water

LL Sample # WW 7364414 S20135565 Mayflower, AR LL Group # 1452685 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 02/13/2014 14:05 by DF ExxonMobil PO Box 4592

Submitted: 02/14/2014 10:00 Houston TX 77210-4592

Reported: 02/26/2014 14:07

P8510 SDG#: PEM85-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received 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	0.052	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				
acce	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.									

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	14046WAI026	02/22/2014	00:43	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14046WAI026	02/17/2014	09:45	Anna E Stager	1



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Sample Description: WS-014(5.5-6.0)021314 Grab Surface Water

S20135565 Mayflower, AR

Pipeline Incident

LL Sample # WW 7364415

LL Group # 1452685 Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 02/13/2014 14:15 by DF ExxonMobil PO Box 4592

Houston TX 77210-4592

Submitted: 02/14/2014 10:00 Reported: 02/26/2014 14:07

P8511 SDG#: PEM85-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received 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	N.D.	0.011	0.053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	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	N.D.	0.011	0.053	1
08357	Fluoranthene	206-44-0	N.D.	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	N.D.	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	0.053	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.053	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.

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	14046WAI026	02/22/2014	01:11	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14046WAI026	02/17/2014	09:45	Anna E Stager	1



Analysis Report

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Sample Description: WS-015(1.5-2.0)021314 Grab Surface Water

LL Sample # WW 7364416 S20135565 Mayflower, AR LL Group # 1452685 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 02/13/2014 14:20 by DF ExxonMobil PO Box 4592

Submitted: 02/14/2014 10:00 Houston TX 77210-4592

Reported: 02/26/2014 14:07

P8512 SDG#: PEM85-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received 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	0.051	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
acce	recovery for the sample surrog					

contacted and the data reported.

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	14046WAI026	02/22/2014	01:39	Chad A Moline	1
10470	BNA Water Extraction	SW-846 3510C	1	14046WAI026	02/17/2014	09:45	Anna E Stager	1



Analysis Report

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Sample Description: WS-015(3.5-4.0)021314 Grab Surface Water

LL Sample # WW 7364417 S20135565 Mayflower, AR LL Group # 1452685 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 02/13/2014 14:30 by DF ExxonMobil

PO Box 4592

Houston TX 77210-4592

Submitted: 02/14/2014 10:00 Reported: 02/26/2014 14:07

P8513 SDG#: PEM85-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor				
GC/MS	Semivolatiles SW-846 8	270C 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	0.051	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				
acce	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.									

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	14046WAI026	02/22/2014	02:07	Chad A Moline	1
10470	BNA Water Extraction	SW-846 3510C	1	14046WAI026	02/17/2014	09:45	Anna E Stager	1



Analysis Report

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Sample Description: WS-012(1.5-2.0)021314 Grab Surface Water

LL Sample # WW 7364418 S20135565 Mayflower, AR LL Group # 1452685 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 02/13/2014 14:35 by DF ExxonMobil PO Box 4592

Submitted: 02/14/2014 10:00 Houston TX 77210-4592

Reported: 02/26/2014 14:07

P8514 SDG#: PEM85-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received 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.	0.012	0.060	1
08357	Acenaphthylene	208-96-8	N.D.	0.012	0.060	1
08357	Anthracene	120-12-7	N.D.	0.012	0.060	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.012	0.060	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.012	0.060	1
08357	Benzo(b) fluoranthene	205-99-2	N.D.	0.012	0.060	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.012	0.060	1
08357	Benzo(k) fluoranthene	207-08-9	N.D.	0.012	0.060	1
08357	Chrysene	218-01-9	N.D.	0.012	0.060	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.012	0.060	1
08357	Fluoranthene	206-44-0	N.D.	0.012	0.060	1
08357	Fluorene	86-73-7	N.D.	0.012	0.060	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.012	0.060	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.012	0.060	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.012	0.060	1
08357	Naphthalene	91-20-3	N.D.	0.036	0.060	1
08357	Phenanthrene	85-01-8	N.D.	0.036	0.060	1
08357	Pyrene	129-00-0	N.D.	0.012	0.060	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	14046WAI026	02/22/2014	02:35	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14046WAI026	02/17/2014	09:45	Anna E Stager	1



Analysis Report

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

Sample Description: WS-012(5.0-5.5)021314 Grab Surface Water

LL Sample # WW 7364419 S20135565 Mayflower, AR LL Group # 1452685 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 02/13/2014 14:40 by DF ExxonMobil PO Box 4592

Houston TX 77210-4592

Submitted: 02/14/2014 10:00 Reported: 02/26/2014 14:07

P8515 SDG#: PEM85-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received 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	0.056	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.056	1
08357	Anthracene	120-12-7	N.D.	0.011	0.056	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.056	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.056	1
08357	Benzo(b) fluoranthene	205-99-2	N.D.	0.011	0.056	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.056	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.056	1
08357	Chrysene	218-01-9	N.D.	0.011	0.056	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.056	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.056	1
08357	Fluorene	86-73-7	N.D.	0.011	0.056	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.056	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.056	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.056	1
08357	Naphthalene	91-20-3	N.D.	0.033	0.056	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.056	1
08357	Pyrene	129-00-0	N.D.	0.011	0.056	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	14046WAI026	02/24/2014	00:08	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14046WAI026	02/17/2014	09:45	Anna E Stager	1



Analysis Report

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

Sample Description: WS-010(1.5-2.0)021314 Grab Surface Water

S20135565 Mayflower, AR

Pipeline Incident

LL Sample # WW 7364420

LL Group # 1452685 Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 02/13/2014 14:55 by DF ExxonMobil PO Box 4592

Houston TX 77210-4592

Submitted: 02/14/2014 10:00 Reported: 02/26/2014 14:07

P8516 SDG#: PEM85-16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received 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	0.056	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.056	1
08357	Anthracene	120-12-7	N.D.	0.011	0.056	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.056	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.056	1
08357	Benzo(b) fluoranthene	205-99-2	N.D.	0.011	0.056	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.056	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.056	1
08357	Chrysene	218-01-9	N.D.	0.011	0.056	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.056	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.056	1
08357	Fluorene	86-73-7	N.D.	0.011	0.056	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.056	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.056	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.056	1
08357	Naphthalene	91-20-3	N.D.	0.033	0.056	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.056	1
08357	Pyrene	129-00-0	N.D.	0.011	0.056	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	14046WAI026	02/24/2014	00:36	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14046WAI026	02/17/2014	09:45	Anna E Stager	1



Analysis Report

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

Sample Description: WS-010(3.5-4.0)021314 Grab Surface Water

LL Sample # WW 7364421 S20135565 Mayflower, AR LL Group # 1452685 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 02/13/2014 15:00 by DF ExxonMobil PO Box 4592

Submitted: 02/14/2014 10:00 Houston TX 77210-4592

Reported: 02/26/2014 14:07

P8517 SDG#: PEM85-17

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received 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.	0.012	0.059	1
08357	Acenaphthylene	208-96-8	N.D.	0.012	0.059	1
08357	Anthracene	120-12-7	N.D.	0.012	0.059	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.012	0.059	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.012	0.059	1
08357	Benzo(b) fluoranthene	205-99-2	N.D.	0.012	0.059	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.012	0.059	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.012	0.059	1
08357	Chrysene	218-01-9	N.D.	0.012	0.059	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.012	0.059	1
08357	Fluoranthene	206-44-0	N.D.	0.012	0.059	1
08357	Fluorene	86-73-7	N.D.	0.012	0.059	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.012	0.059	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.012	0.059	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.012	0.059	1
08357	Naphthalene	91-20-3	N.D.	0.035	0.059	1
08357	Phenanthrene	85-01-8	N.D.	0.035	0.059	1
08357	Pyrene	129-00-0	N.D.	0.012	0.059	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	14046WAI026	02/24/2014	01:04	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14046WAI026	02/17/2014	09:45	Anna E Stager	1



Analysis Report

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

Sample Description: WS-006(0.5-1.0)021314 Grab Surface Water

LL Sample # WW 7364422 S20135565 Mayflower, AR LL Group # 1452685 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 02/13/2014 15:10 by DF ExxonMobil PO Box 4592

Houston TX 77210-4592

Submitted: 02/14/2014 10:00 Reported: 02/26/2014 14:07

P8518 SDG#: PEM85-18BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received 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.	0.030	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

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	14046WAI026	02/21/2014	18:41	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14046WAI026	02/17/2014	09:45	Anna E Stager	1



Analysis Report

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

Sample Description: WS-006(0.5-1.0)021314MS Grab Surface Water

LL Sample # WW 7364423 S20135565 Mayflower, AR LL Group # 1452685 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 02/13/2014 15:10 by DF ExxonMobil PO Box 4592

Submitted: 02/14/2014 10:00 Houston TX 77210-4592

Reported: 02/26/2014 14:07

P8518 SDG#: PEM85-18MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	1.1	0.010	0.052	1
08357	Acenaphthylene	208-96-8	1.1	0.010	0.052	1
08357	Anthracene	120-12-7	0.99	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	0.86	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	0.72	0.010	0.052	1
08357	Benzo(b) fluoranthene	205-99-2	0.83	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	0.78	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	0.72	0.010	0.052	1
08357	Chrysene	218-01-9	0.82	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	0.76	0.010	0.052	1
08357	Fluoranthene	206-44-0	0.80	0.010	0.052	1
08357	Fluorene	86-73-7	1.1	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.73	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	0.99	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	1.1	0.010	0.052	1
08357	Naphthalene	91-20-3	1.0	0.031	0.052	1
08357	Phenanthrene	85-01-8	1.0	0.031	0.052	1
08357	Pyrene	129-00-0	0.95	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 Ti	me	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14046WAI026	02/21/2014	19:09	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14046WAI026	02/17/2014	09:45	Anna E Stager	1



Analysis Report

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

Sample Description: WS-006(0.5-1.0)021314MSD Grab Surface Water

LL Sample # WW 7364424 S20135565 Mayflower, AR LL Group # 1452685 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 02/13/2014 15:10 by DF ExxonMobil PO Box 4592

Submitted: 02/14/2014 10:00 Houston TX 77210-4592

Reported: 02/26/2014 14:07

P8518 SDG#: PEM85-18MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received 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	0.012	0.058	1
08357	Acenaphthylene	208-96-8	1.2	0.012	0.058	1
08357	Anthracene	120-12-7	1.1	0.012	0.058	1
08357	Benzo(a)anthracene	56-55-3	1.0	0.012	0.058	1
08357	Benzo(a)pyrene	50-32-8	0.97	0.012	0.058	1
08357	Benzo(b) fluoranthene	205-99-2	1.0	0.012	0.058	1
08357	Benzo(g,h,i)perylene	191-24-2	1.1	0.012	0.058	1
08357	Benzo(k)fluoranthene	207-08-9	1.0	0.012	0.058	1
08357	Chrysene	218-01-9	1.0	0.012	0.058	1
08357	Dibenz(a,h)anthracene	53-70-3	1.1	0.012	0.058	1
08357	Fluoranthene	206-44-0	0.92	0.012	0.058	1
08357	Fluorene	86-73-7	1.2	0.012	0.058	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	1.1	0.012	0.058	1
08357	1-Methylnaphthalene	90-12-0	1.1	0.012	0.058	1
08357	2-Methylnaphthalene	91-57-6	1.3	0.012	0.058	1
08357	Naphthalene	91-20-3	1.2	0.035	0.058	1
08357	Phenanthrene	85-01-8	1.2	0.035	0.058	1
08357	Pyrene	129-00-0	1.1	0.012	0.058	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	14046WAI026	02/21/2014	19:37	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14046WAI026	02/17/2014	09:45	Anna E Stager	1



Analysis Report

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

Sample Description: DUP-WS-124-021314 Grab Surface Water

LL Sample # WW 7364425 S20135565 Mayflower, AR LL Group # 1452685 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 02/13/2014 by DF ExxonMobil PO Box 4592

Houston TX 77210-4592

Submitted: 02/14/2014 10:00 Reported: 02/26/2014 14:07

P8519 SDG#: PEM85-19FD*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received 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	0.052	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

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	14046WAI026	02/24/2014	01:32	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14046WAI026	02/17/2014	09:45	Anna E Stager	1

Environmental

Analysis Report

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

Page 1 of 2

Quality Control Summary

Client Name: ExxonMobil Group Number: 1452685

Reported: 02/26/14 at 02:07 PM

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

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

Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank MDL**	Blank <u>LOO</u>	Report <u>Units</u>	LCS %REC	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD Max
Batch number: 14046WAI026	Sample num	mber(s): 7	364412-736	54425					
Acenaphthene	N.D.	0.010	0.050	ug/l	108		83-119		
Acenaphthylene	N.D.	0.010	0.050	ug/l	108		81-130		
Anthracene	N.D.	0.010	0.050	ug/l	105		83-125		
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	98		79-122		
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	95		80-121		
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	110		79-136		
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	102		72-132		
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	95		81-131		
Chrysene	N.D.	0.010	0.050	ug/l	102		84-118		
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	91		66-133		
Fluoranthene	N.D.	0.010	0.050	ug/l	93		84-124		
Fluorene	N.D.	0.010	0.050	ug/l	109		82-119		
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	94		68-132		
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	101		86-130		
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	112		81-131		
Naphthalene	N.D.	0.030	0.050	ug/l	102		82-122		
Phenanthrene	N.D.	0.030	0.050	ug/l	97		83-116		
Pyrene	N.D.	0.010	0.050	ug/l	109		78-125		

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 <u>%REC</u>	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: 14046WAI026	Sample	number(s)	: 7364412	-73644	25 UNSP	K: 7364422			
Acenaphthene	102	104	60-130	14	30				
Acenaphthylene	103	105	75-132	15	30				
Anthracene	96	98	69-119	14	30				
Benzo(a)anthracene	83	89	37-135	19	30				
Benzo(a)pyrene	69	83	64-123	30	30				
Benzo(b)fluoranthene	80	89	41-137	23	30				
Benzo(g,h,i)perylene	76	96	21-127	36*	30				
Benzo(k)fluoranthene	69	89	38-130	36*	30				
Chrysene	79	86	58-117	21	30				
Dibenz(a,h)anthracene	74	95	17-134	37*	30				
Fluoranthene	77	79	63-129	15	30				
Fluorene	104	107	74-127	14	30				
Indeno(1,2,3-cd)pyrene	70	91	26-130	37*	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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Page 2 of 2

Quality Control Summary

Client Name: ExxonMobil Group Number: 1452685

Reported: 02/26/14 at 02:07 PM

Sample Matrix Quality Control

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

	MS	MSD	MS/MSD		RPD	BKG	DUP	DUP	Dup RPD
<u>Analysis Name</u>	%REC	%REC	<u>Limits</u>	RPD	<u>MAX</u>	Conc	Conc	RPD	Max
1-Methylnaphthalene	95	97	82-133	14	30				
2-Methylnaphthalene	105	108	73-138	15	30				
Naphthalene	98	100	58-131	14	30				
Phenanthrene	98	98	72-126	13	30				
Pyrene	92	94	36-142	14	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: 14046WAI026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene- d10
7364412	79	80	87
7364413	79	68	88
7364414	69	46*	85
7364415	75	70	86
7364416	67	43*	83
7364417	73	53*	89
7364418	75	82	90
7364419	84	69	87
7364420	72	71	88
7364421	83	75	88
7364422	80	76	92
7364423	79	68	91
7364424	81	84	92
7364425	87	73	89
Blank	83	92	94
LCS	84	90	97
MS	79	68	91
MSD	81	84	92
Limits:	59-128	62-141	70-134

^{*-} Outside of specification

^{**-}This limit was used in the evaluation of the final result for the blank

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

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

ExxonMobil Analysis Request/Chain of Custody

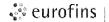
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Sample Administration Receipt Documentation Log

Doc Log ID:

4761

Group Number(s): 1452685

Client: ExxonMobil

Mayflower Pipeline Incident

Delivery and Receipt Information

Delivery Method:

UPS

Arrival Timestamp:

02/14/2014 10:00

Number of Packages:

1

Number of Projects:

1 .

State/Province of Origin:

<u>AR</u>

Arrival Condition Summary

Shipping Container Sealed:

<u>Yes</u> Yes Total Trip Blank Qty:

0

Custody Seal Present:

Yes

Trip Blank Type:

N/A

Custody Seal Intact: Samples Chilled:

<u>Yes</u>

Air Quality Samples Present:

Air Quality Flow Controllers Present:

<u>No</u>

Paperwork Enclosed:

Yes

Flow Controller Quantity:

N/A 0

Samples Intact:

Yes

Air Quality Returns:

<u>N/A</u>

Missing Samples:

No No

Extra Samples:

<u>No</u>

Discrepancy in Container Qty on COC: Sample IDs on COC match Containers:

Yes

Sample Date/Times match COC:

Yes

VOA Vial Headspace ≥ 6mm:

N/A

VOA IDs (\geq 6mm):

N/A

Unpacked by Wesley Miller (2308) at 16:22 on 02/14/2014

Samples Chilled Details: Mayflower Pipeline Incident

Thermometer Types: DT = Digital IR = Infrared

Thermometer ID Raw Temp (°C) Corrected Temp (°C) Cooler# 3258-IR

4.8

Thermometer Type Ice Type IR

Wet

Ice Present?

Bagged

Ice Container Elevated Temp?

General Comments:

No temp bottle received

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)
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)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

- < 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.
- > 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.

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

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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