



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

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 Prepared for:

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

December 10, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 11/27/2013 Group Number: 1437224 SDG: PEM73 PO Number: B0086003.1301 State of Sample Origin: AR

Client Sample Description
WS-015(1.5-2.0)112513 Grab Surface Water
WS-015(3.5-4.0)112513 Grab Surface Water
WS-014(1.5-2.0)112513 Grab Surface Water
WS-014(5.5-6.0)112513 Grab Surface Water
WS-012(1.5-2.0)112513 Grab Surface Water
WS-012(5.0-5.5)112513 Grab Surface Water
WS-010(1.5-2.0)112513 Grab Surface Water
WS-010(3.5-4.0)112513 Grab Surface Water
WS-006(0.5-1.0)112513 Grab Surface Water
WS-006(0.5-1.0)112513MS Grab Surface Water
WS-006(0.5-1.0)112513MSD Grab Surface Water
WS-011(1.5-2.0)112613 Grab Surface Water
WS-011(5.0-5.5)112613 Grab Surface Water
WS-007(0.5-1.0)112613 Grab Surface Water
WS-009(Surface)112613 Grab Surface Water
WS-001(0.5-1.0)112613 Grab Surface Water
WS-021(Surface)112613 Grab Surface Water
WS-004(0.5-1.0)112613 Grab Surface Water
WS-020(Surface)112613 Grab Surface Water
DUP-WS-114-112513 Grab Surface Water
WS-EB-115-112513 Grab Water
WS-EB-116-112613 Grab Water

Lancaster Labs (LL) #

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

ELECTRONIC ARCADIS COPY TO Attn: Stephen Barrick





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ELECTRONIC ARCADIS COPY TO ELECTRONIC ExxonMobil COPY TO ARCADIS ELECTRONIC COPY TO ELECTRONIC ARCADIS COPY TO ELECTRONIC ExxonMobil COPY TO ELECTRONIC ExxonMobil COPY TO

Attn: Lyndi Mott Attn: Michael J. Firth Attn: Emily Leamer Attn: Rhiannon Parmalee Attn: Michael L Sixsmith Attn: Julie Foster

Respectfully Submitted,

Katherine a. Klinefelter

Katherine A. Klinefelter Principal Specialist

(717) 556-7256

🛟 eurofins

Lancaster Laboratories Environmental

Project Name: Mayflower, AR Pipeline Incident LLI Group #: 1437224

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: 7295826, 7295829</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.

<u>Batch #: 13332wAF026 (Sample number(s): 7295813-7295834 UNSPK: 7295821)</u>

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

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7295826, 7295829



Analysis Report

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Sample	Description:	WS-015(1.5-2.0)112513	Grab	Surface	Water	LL	Sample	#	ww	729581	3
		Mayflower, AR				LГ	Group	#	143	7224	
		Pipeline Incident				Aco	count	#	147	39	

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/25/2013 08:40	by RL	ExxonMobil c/o Arcadis
		630 Plaza Drive, Suite 600
Submitted: 11/27/2013 09:35		Highlands Ranch CO 80129

Submitted: 11/27/2013 09:35 Reported: 12/10/2013 18:57

25151 SDG#: PEM73-01

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	0.057	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.057	1
08357	Anthracene	120-12-7	N.D.	0.011	0.057	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.057	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.057	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.057	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.057	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.057	1
08357	Chrysene	218-01-9	N.D.	0.011	0.057	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.057	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.057	1
08357	Fluorene	86-73-7	N.D.	0.011	0.057	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.057	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.057	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.057	1
08357	Naphthalene	91-20-3	N.D.	0.034	0.057	1
08357	Phenanthrene	85-01-8	N.D.	0.034	0.057	1
08357	Pyrene	129-00-0	N.D.	0.011	0.057	1

General Sample Comments

Laboratory Sample Analysis Recon	Laboratorv	Sample	Analvsis	Record
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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	13332WAF026	12/01/2013 07:29	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21:30	Nicholas W Shroyer	1



Analysis Report

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Sample	Description:	WS-015(3.5-4.0)112513	Grab	Surface	Water	LГ	Sample	#	ww	729581	4
		Mayflower, AR				$\mathbf{L}\mathbf{L}$	Group	#	143	7224	
		Pipeline Incident				Aco	count	#	147	39	

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/25/2013 08:50	by RL	ExxonMobil c/o Arcadis
		630 Plaza Drive, Suite 600
Submitted: 11/27/2013 09:35		Highlands Ranch CO 80129

Submitted: 11/27/2013 09:35 Reported: 12/10/2013 18:57

25152 SDG#: PEM73-02

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

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	13332WAF026	12/01/2013 07	7:59	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21	:30	Nicholas W Shroyer	1



Analysis Report

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Sample	Description:	WS-014(1.5-2.0)112513	Grab	Surface	Water	LL	Sample	#	ww	729581	5
		Mayflower, AR				LГ	Group	#	143	7224	
		Pipeline Incident				Aco	count	#	147	39	

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/25/2013	09:00	by RL	ExxonMobil c/o Arcadis
Submitted: 11/27/2013	09:35		630 Plaza Drive, Suite 600 Highlands Ranch CO 80129

Reported: 12/10/2013 18:57

25141 SDG#: PEM73-03

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	0.050	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	0.050	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.050	1
08357	Pyrene	129-00-0	N.D.	0.010	0.050	1

General Sample Comments

Laboratory	Sample	Analysis	Record
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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	13332WAF026	12/01/2013 08:28	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21:30	Nicholas W Shroyer	1



Analysis Report

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Sample	Description:	WS-014(5.5-6.0)112513 Gr	ab Surface	Water	LL	Sample	#	ww	7295816	;
		Mayflower, AR			\mathbf{LL}	Group	#	143	7224	
		Pipeline Incident			Acc	ount	#	147	39	

ExxonMobil c/o Arcadis 630 Plaza Drive, Suite 600

Highlands Ranch CO 80129

Project Name: Mayflower, AR Pipeline Incident

Collected:	11/25/2013	09:10	by RL	
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Submitted: 11/27/2013 09:35 Reported: 12/10/2013 18:57

25142 SDG#: PEM73-04

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	0.036 J	0.036	0.059	1
08357	Phenanthrene	85-01-8	N.D.	0.036	0.059	1
08357	Pyrene	129-00-0	N.D.	0.012	0.059	1

General Sample Comments

Laboratory	Sample	Analysis	Record
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CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	e	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13332WAF026	12/01/2013 0	08:58	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 2	21:30	Nicholas W Shroyer	1



Analysis Report

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Sample Description: WS-012(1.5-2.0)112513 Grab Surface Water	LL Sample # WW 7295817
Mayflower, AR	LL Group # 1437224
Pipeline Incident	Account # 14739

ExxonMobil c/o Arcadis 630 Plaza Drive, Suite 600

Highlands Ranch CO 80129

Project Name: Mayflower, AR Pipeline Incident

Collected:	11/25/2013	09:20	by RL	
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Submitted: 11/27/2013 09:35 Reported: 12/10/2013 18:57

25121 SDG#: PEM73-05

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

Laboratory	Sample	Analysis	Record
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CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	e	Analyst	Dilution Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13332WAF026	12/01/2013 (09:27	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 2	21:30	Nicholas W Shroyer	1



Analysis Report

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Sample I	Description:	WS-012(5.0-5.5)112513	Grab	Surface	Water	LL	Sample	#	ww	729581	8
		Mayflower, AR				$\mathbf{L}\mathbf{L}$	Group	#	143	7224	
		Pipeline Incident				Aco	count	#	147	39	

ExxonMobil c/o Arcadis 630 Plaza Drive, Suite 600

Highlands Ranch CO 80129

Project Name: Mayflower, AR Pipeline Incident

	Collected:	11/25/2013	09:30	by RL
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Submitted: 11/27/2013 09:35 Reported: 12/10/2013 18:57

25122 SDG#: PEM73-06

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

Laboratory Sample Analysis Rec

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	13332WAF026	12/01/2013 09:57	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21:30	Nicholas W Shroyer	1



Analysis Report

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Sample	Description:	WS-010(1.5-2.0)112513	Grab	Surface	Water	LL	Sample	#	ww	7295819	,
		Mayflower, AR				LL	Group	#	143	7224	
		Pipeline Incident				Aco	count	#	147	39	

ExxonMobil c/o Arcadis 630 Plaza Drive, Suite 600

Highlands Ranch CO 80129

Project Name: Mayflower, AR Pipeline Incident

Collected:	11/25/2013	09:35	by RL
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Submitted: 11/27/2013 09:35 Reported: 12/10/2013 18:57

25101 SDG#: PEM73-07

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

Laboratory Sampl	e Analysis Record
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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	13332WAF026	12/01/2013 10:26	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21:30	Nicholas W Shroyer	1



Analysis Report

Drive, Suite 600

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)112513 Gra	ab Surface	Water	$\mathbf{L}\mathbf{L}$	Sample	#	ww	7295820	
		Mayflower, AR			$\mathbf{L}\mathbf{L}$	Group	#	143	7224	
		Pipeline Incident			Acc	ount	#	147	39	

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/25/2013	09:40	by RL	ExxonMobil c/o Arcadis
			630 Plaza Drive, Suite 60
Submitted: 11/27/2013	09:35		Highlands Ranch CO 80129

Submitted: 11/27/2013 09:35 Reported: 12/10/2013 18:57

25102 SDG#: PEM73-08

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	0.054	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.054	1
08357	Anthracene	120-12-7	N.D.	0.011	0.054	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.054	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.054	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.054	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.054	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.054	1
08357	Chrysene	218-01-9	N.D.	0.011	0.054	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.054	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.054	1
08357	Fluorene	86-73-7	N.D.	0.011	0.054	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.054	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.054	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.054	1
08357	Naphthalene	91-20-3	N.D.	0.033	0.054	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.054	1
08357	Pyrene	129-00-0	N.D.	0.011	0.054	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	13332WAF026	12/01/2013 10:56	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21:30	Nicholas W Shroyer	: 1



Analysis Report

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Sample	Description:	WS-006(0.5-1.0)112513	Grab	Surface	Wate	er	LL	Sample	#	WW 7	295821	
		Mayflower, AR				:	\mathbf{LL}	Group	#	1437	224	
		Pipeline Incident				Acc	ount	#	1473	39		

Project Name: Mayflower, AR Pipeline Incident

Collected:	11/25/2013	09:50	by RL	ExxonMobil c/o Arcadis
				630 Plaza Drive, Suite 600
Submitted:	11/27/2013	09:35		Highlands Ranch CO 80129
Reported:	12/10/2013	18:57		

25006 SDG#: PEM73-09BKG

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

Laboratory Sampl	e Analysis Record
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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	13332WAF026	12/01/2013 06:01	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21:30	Nicholas W Shroyer	1



Analysis Report

600

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Sample	Description:	WS-006(0.5-1.0)112513MS	Grab	Surface	Water	$\mathbf{L}\mathbf{L}$	Sample	#	ww	7295822	
		Mayflower, AR				\mathbf{LL}	Group	#	143	7224	
		Pipeline Incident				Acc	ount	#	147	39	

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/25/2013 09:50 by RL	ExxonMobil c/o Arcadis
	630 Plaza Drive, Suite 60
Submitted: 11/27/2013 09:35	Highlands Ranch CO 80129
Reported: 12/10/2013 18:57	

25006 SDG#: PEM73-09MS

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	0.98	0.010	0.051	1
08357	Acenaphthylene	208-96-8	1.1	0.010	0.051	1
08357	Anthracene	120-12-7	0.85	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.84	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.58	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.82	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.66	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.84	0.010	0.051	1
08357	Chrysene	218-01-9	0.74	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	0.58	0.010	0.051	1
08357	Fluoranthene	206-44-0	1.0	0.010	0.051	1
08357	Fluorene	86-73-7	1.1	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.63	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	1.1	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	1.1	0.010	0.051	1
08357	Naphthalene	91-20-3	1.0	0.030	0.051	1
08357	Phenanthrene	85-01-8	0.97	0.030	0.051	1
08357	Pyrene	129-00-0	0.94	0.010	0.051	1

General Sample Comments

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	13332WAF026	12/01/2013 06:30	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21:30	Nicholas W Shroyer	1



Analysis Report

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Sample	Description:	WS-006(0.5-1.0)112513MSD	Grab	Surface	Water	LL	Sample	#	ww	7295823	i
		Mayflower, AR				$\mathbf{L}\mathbf{L}$	Group	#	143	7224	
		Pipeline Incident				Aco	count	#	147	39	

Project Name: Mayflower, AR Pipeline Incident

Collected:	11/25/2013	09:50	by RL	ExxonMobil c/o Arcadis
				630 Plaza Drive, Suite 600
Submitted:	11/27/2013	09:35		Highlands Ranch CO 80129
Reported:	12/10/2013	18:57		

25006 SDG#: PEM73-09MSD

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	1.0	0.010	0.052	1
08357	Acenaphthylene	208-96-8	1.1	0.010	0.052	1
08357	Anthracene	120-12-7	0.85	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	0.87	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	0.57	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	0.66	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	0.84	0.010	0.052	1
08357	Chrysene	218-01-9	0.76	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	0.58	0.010	0.052	1
08357	Fluoranthene	206-44-0	1.1	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	0.63	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	1.1	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	1.1	0.010	0.052	1
08357	Naphthalene	91-20-3	1.1	0.031	0.052	1
08357	Phenanthrene	85-01-8	0.97	0.031	0.052	1
08357	Pyrene	129-00-0	0.95	0.010	0.052	1

General Sample Comments

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	13332WAF026	12/01/2013 07:00	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21:30	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-011(1.5-2.0)112613	Grab	Surface	Water		LL	Sample	#	ww	7295824	4
		Mayflower, AR					$\mathbf{L}\mathbf{L}$	Group	#	143	7224	
		Pipeline Incident				Aco	count	#	147	39		

ExxonMobil c/o Arcadis 630 Plaza Drive, Suite 600

Highlands Ranch CO 80129

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/26/2013 08:10 by RL

Submitted: 11/27/2013 09:35 Reported: 12/10/2013 18:57

26111 SDG#: PEM73-10

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.	0.011	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

Laboratory Sample Analysis Re	ecord
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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	13332WAF026	12/01/2013 11:25	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21:30	Nicholas W Shroyer	1



Analysis Report

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Sample	Description:	WS-011(5.0-5.5)112613 G	Frab	Surface	Water	\mathbf{LL}	Sample	#	ww	7295825
		Mayflower, AR				LГ	Group	#	143	7224
		Pipeline Incident				Aco	count	#	147	39

Project Name: Mayflower, AR Pipeline Incident

Collected:	11/26/2013	08:20	by RL	ExxonMobil c/o Arcadis
				630 Plaza Drive, Suite 600
Submitted:	11/27/2013	09:35		Highlands Ranch CO 80129

Submitted: 11/27/2013 09:35 Reported: 12/10/2013 18:57

26112 SDG#: PEM73-11

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	0.056	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

Laboratory S	Sample	Analysis	Record
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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	13332WAF026	12/01/2013 11:55	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21:30	Nicholas W Shroyer	1



Analysis Report

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Sample	Description:	WS-007(0.5-1.0)112613	Grab	Surface	Water	LL	Sample	#	ww	729582	6
		Mayflower, AR			$\mathbf{L}\mathbf{L}$	Group	#	143	7224		
		Pipeline Incident				Aco	count	#	147	39	

ExxonMobil c/o Arcadis 630 Plaza Drive, Suite 600

Highlands Ranch CO 80129

Project Name: Mayflower, AR Pipeline Incident

Collected:	11/26/2013	08:30	by RL
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Submitted: 11/27/2013 09:35 Reported: 12/10/2013 18:57

26007 SDG#: PEM73-12

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	0.052	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	recovery for the sample surrog ptance limits as noted on the	·				

contacted and the data reported.

leacted 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.

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	13332WAF026	12/01/2013 12:25	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21:30	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)112613	Grab	Surface	Water	•	LГ	Sample	#	ww	7295827	7
		Mayflower, AR					LГ	Group	#	143	7224	
		Pipeline Incident					Aco	count	#	147	39	

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/26/2013	08:40	by RL	ExxonMobil c/o Arcadis
			630 Plaza Drive, Suite 600
Submitted: 11/27/2013	09:35		Highlands Ranch CO 80129

26009 SDG#: PEM73-13

Reported: 12/10/2013 18:57

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	0.057	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.057	1
08357	Anthracene	120-12-7	N.D.	0.011	0.057	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.057	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.057	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.057	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.057	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.057	1
08357	Chrysene	218-01-9	N.D.	0.011	0.057	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.057	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.057	1
08357	Fluorene	86-73-7	N.D.	0.011	0.057	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.057	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.057	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.057	1
08357	Naphthalene	91-20-3	0.036 J	0.034	0.057	1
08357	Phenanthrene	85-01-8	N.D.	0.034	0.057	1
08357	Pyrene	129-00-0	N.D.	0.011	0.057	1

General Sample Comments

Laboratory	Sample	Analysis	Record
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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	13332WAF026	12/01/2013 12:54	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21:30	Nicholas W Shroyer	1



Analysis Report

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

Sample Dea	scription:	WS-001(0.5-1.0)112613	Grab	Surface	Wate	er I	LГ	Sample	#	ww	7295828	3
		Mayflower, AR				I	LГ	Group	#	143	7224	
		Pipeline Incident				1	Acc	ount	#	147	39	

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/26/2013 08:50	by RL	ExxonMobil c/o Arcadis
		630 Plaza Drive, Suite 600
Submitted: 11/27/2013 09:35		Highlands Ranch CO 80129

Submitted: 11/27/2013 09:35 Reported: 12/10/2013 18:57

26001 SDG#: PEM73-14

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.	0.010	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

Laboratory Sampl	e Analysis Record
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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	13332WAF026	12/01/2013 13:24	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21:30	Nicholas W Shroyer	1



Analysis Report

Suite 600

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

Sample	Description:	WS-021(Surface)112613 Gra	ab Surface	Water	LГ	Sample	#	ww	7295829	
		Mayflower, AR			$\mathbf{L}\mathbf{L}$	Group	#	143	7224	
		Pipeline Incident			Acc	ount	#	147	39	

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/26/2013 09:00 by RL	ExxonMobil c/o Arcadis
	630 Plaza Drive, Suite 60
Submitted: 11/27/2013 09:35	Highlands Ranch CO 80129

26021 SDG#: PEM73-15

Reported: 12/10/2013 18:57

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	0.011 J	0.010	0.051	1
	recovery for the sample surro ptance limits as noted on the					

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.

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	13332WAF026	12/01/2013 13:54	Brian K Graham	1	
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21:30	Nicholas W Shroyer	1	



Analysis Report

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Sample	Description:	WS-004(0.5-1.0)112613	Grab	Surface	Water	LL	Sample	#	WW 7295830
		Mayflower, AR				LL	Group	#	1437224
		Pipeline Incident				Aco	count	#	14739

Project Name: Mayflower, AR Pipeline Incident

Collected:	11/26/2013	09:10	by RL	ExxonMobil c/o Arcadis
				630 Plaza Drive, Suite 600
Submitted:	11/27/2013	09:35		Highlands Ranch CO 80129

Submitted: 11/27/2013 09:35 Reported: 12/10/2013 18:57

26004 SDG#: PEM73-16

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	0.054	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.054	1
08357	Anthracene	120-12-7	N.D.	0.011	0.054	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.054	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.054	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	0.054	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.054	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.054	1
08357	Chrysene	218-01-9	N.D.	0.011	0.054	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.054	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.054	1
08357	Fluorene	86-73-7	N.D.	0.011	0.054	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.054	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.054	1
08357	2-Methylnaphthalene	91-57-6	0.011 J	0.011	0.054	1
08357	Naphthalene	91-20-3	N.D.	0.033	0.054	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.054	1
08357	Pyrene	129-00-0	N.D.	0.011	0.054	1

General Sample Comments

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	13332WAF026	12/01/2013 14:23	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21:30	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-020(Surface)112613 Gr	ab Surface	Water	LL	Sample	#	ww	7295831	
		Mayflower, AR			\mathbf{LL}	Group	#	143	7224	
		Pipeline Incident			Acc	ount	#	147	39	

Project Name: Mayflower, AR Pipeline Incident

Collected:	11/26/2013	09:20	by RL	ExxonMobil c/o Arcadis
				630 Plaza Drive, Suite 600
Submitted:	11/27/2013	09:35		Highlands Ranch CO 80129
Reported:	12/10/2013	18:57		

26020 SDG#: PEM73-17

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.	0.010	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	0.011 J	0.010	0.051	1
08357	Naphthalene	91-20-3	0.031 J	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

Laboratory Sample Analysis Recon	Laboratorv	Sample	Analvsis	Record
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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	13332WAF026	12/01/2013 14:53	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21:30	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:	DUP-WS-114-112513	Grab	Surface	Wate	er	$\mathbf{L}\mathbf{L}$	Sample	#	WW	7295832	2
		Mayflower, AR					$\mathbf{L}\mathbf{L}$	Group	#	143	7224	
		Pipeline Incident					Acc	count	#	147	39	

ExxonMobil c/o Arcadis 630 Plaza Drive, Suite 600

Highlands Ranch CO 80129

Project Name: Mayflower, AR Pipeline Incident

Collected: 11/25/2013 by RL

Submitted: 11/27/2013 09:35 Reported: 12/10/2013 18:57

25DUP SDG#: PEM73-18FD

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

Laboratory	Sample	Analysis	Record
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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	13332WAF026	12/01/2013 15:22	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013 21:30	Nicholas W Shroyer	1



Analysis Report

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Highlands Ranch CO 80129

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Sample Description:	WS-EB-115-112513 Grab Water	LL Samp	le #	WW 7295833
	Mayflower, AR	LL Grou	p #	1437224
	Pipeline Incident	Account	#	14739

Project Name: Mayflower, AR Pipeline Incident

Collected:	11/	25/	/2013	10:30	by	RL
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Submitted: 11/27/2013 09:35 Reported: 12/10/2013 18:57

25115 SDG#: PEM73-19EB

As Received As Received CAT As Received Method Limit of No. Analysis Name CAS Number Result Detection Limit* Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM ug/l 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 0.090 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

Laboratory	Sample	Analvsis	Record
Laboratory	Sampre	ALIALYSIS	recor

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	13332WAF026	12/02/2013	03:09	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013	21:30	Nicholas W Shroyer	1



Analysis Report

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Highlands Ranch CO 80129

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Sample Description:	WS-EB-116-112613 Grab Water	LL Sample	#	WW 7295834
	Mayflower, AR	LL Group	#	1437224
	Pipeline Incident	Account	#	14739

Project Name: Mayflower, AR Pipeline Incident

Collected:	11/26	/2013 1	11:30	by	RL
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Submitted: 11/27/2013 09:35 Reported: 12/10/2013 18:57

26116 SDG#: PEM73-20EB*

CAT As Received Method Limit of Dilu No. Analysis Name CAS Number Result Detection Limit* Quantitation Fact	
GC/MS Semivolatiles SW-846 8270C SIM ug/l 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 0.084 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

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	13332WAF026	12/02/2013	03:39	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13332WAF026	11/30/2013	21:30	Nicholas W Shroyer	1



Analysis Report

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Page 1 of 2

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis Reported: 12/10/13 at 06:57 PM Group Number: 1437224

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 <u>%REC</u>	LCSD <u>%REC</u>	LCS/LCSD <u>Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 13332WAF026	Sample nu	mber(s): 7	295813-729	95834					
Acenaphthene	N.D.	0.010	0.050	ug/l	96		77-118		
Acenaphthylene	N.D.	0.010	0.050	ug/l	101		80-123		
Anthracene	N.D.	0.010	0.050	ug/l	100		78-123		
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	95		73-127		
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	101		72-120		
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	108		79-136		
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	106		64-130		
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	112		73-131		
Chrysene	N.D.	0.010	0.050	ug/l	101		76-125		
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	101		58-131		
Fluoranthene	N.D.	0.010	0.050	ug/l	104		79-124		
Fluorene	N.D.	0.010	0.050	ug/l	101		74-115		
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	98		62-130		
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	106		80-126		
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	106		81-124		
Naphthalene	N.D.	0.030	0.050	ug/l	98		75-120		
Phenanthrene	N.D.	0.030	0.050	ug/l	93		75-120		
Pyrene	N.D.	0.010	0.050	ug/l	94		71-130		

Sample Matrix Quality Control

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

<u>Analysis Name</u>	MS <u>%REC</u>	MSD <u>%REC</u>	MS/MSD Limits	<u>RPD</u>	RPD <u>MAX</u>	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: 13332WAF026	Sample	number(s)	: 7295813	-729583	34 UNSP	K: 7295821			
Acenaphthene	97	96	47-136	3	30				
Acenaphthylene	105	105	33-146	4	30				
Anthracene	84	81	69-119	0	30				
Benzo(a)anthracene	83	84	37-150	4	30				
Benzo(a)pyrene	57*	54*	64-123	2	30				
Benzo(b)fluoranthene	81	79	33-152	1	30				
Benzo(g,h,i)perylene	65	63	36-138	0	30				
Benzo(k)fluoranthene	83	80	31-142	0	30				
Chrysene	74	73	34-135	2	30				
Dibenz(a,h)anthracene	57	56	17-134	1	30				
Fluoranthene	102	102	39-147	4	30				
Fluorene	105	105	38-149	4	30				
Indeno(1,2,3-cd)pyrene	62	60	29-143	0	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 c/o Arcadis Reported: 12/10/13 at 06:57 PM Group Number: 1437224

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>	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	RPD	MAX	Conc	Conc	RPD	Max
1-Methylnaphthalene	112	110	49-152	1	30				
2-Methylnaphthalene	112	109	51-146	0	30				
Naphthalene	103	102	58-131	2	30				
Phenanthrene	96	93	48-140	0	30				
Pyrene	93	90	59-125	1	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: 13332WAF026									
Baten nu	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene- d10							
7295813	107	82	110							
7295814	97	73	103							
7295815	95	68	101							
7295816	102	85	108							
7295817	102	85	109							
7295818	100	84	107							
7295819	97	71	104							
7295820	100	80	104							
7295821	95	77	101							
7295822	100	72	110							
7295823	101	67	106							
7295824	100	81	103							
7295825	99	79	103							
7295826	80	53*	91							
7295827	110	101	109							
7295828	110	87	112							
7295829	89	59*	102							
7295830	95	77	104							
7295831	91	80	100							
7295832	98	83	104							
7295833	105	96	109							
7295834	103	97	106							
Blank	88	81	94							
LCS	101	100	105							
MS	100	72	110							
MSD	101	67	106							
Limits:	44-137	62-141	51-136							

*- Outside of specification

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

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

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

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	aytlower, P	Cost Center/AFE					Ground												-	B = NaOH D = Other	
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WS-015(3,5	-4,0)112513		0850	X			X		2	2											
WS-014(1.5	-2.0)1/2513	11-25-13 (ÂD	χ			X		2	2											
WS-014(5.5	-6.0) 112513	11-25-13	0916	Х			X		2	2											
WS-012 (1.5	-2.0) 112513	11-25-13 (2920	Ý			X		2	2											
WS-012 (5.	0-55) [125]	3 11-25-13	0930	X			X		2	2											
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WS-010 13	5-4.0) 12513	3 11-25-13	0940	X			X		2	2											
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Laboratories Environmental Sample Administration /437224 Receipt Documentation Log										
Client	Client/Project: Example Mobil Shipping Container Sealed: YES. NO									
Date o	Date of Receipt: 11/27/13 Custody Seal Present *: (YES) NO									
Time of Receipt: <u>935</u> * Custody seal was intact unless otherwise noted in the										
Sourc	e Code:	60-1		Package		Chilled	Not Chilled			
			Temperature of	Shipping Contai	ners					
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments			
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11	Unpacker Signature/Emp#: 2328 Date/Time: 11/27/13 1430									
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	Issued by Dept. 6042 Management 2174.06									

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Lancaster Laboratories Environmental

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 \geq the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

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

Inorganic Qualifiers

- B Value is <CRDL, but ≥IDL
- **E** Estimated due to interference
- M Duplicate injection precision not met
- **N** Spike sample not within control limits
- **S** Method of standard additions (MSA) used for calculation
- U Compound was not detected
- W Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA < 0.995

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

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

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

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

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