



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 PO Box 4592 Houston TX 77210-4592

April 22, 2014

Project: Mayflower, AR Pipeline Incident

Submittal Date: 04/10/2014 Group Number: 1466121 SDG: PEM94 PO Number: 4410181435 Release Number: SIXSMITH State of Sample Origin: AR

Client Sample Description	Lancaster Labs (LL) #
WS-007(0.5-1.0)040914 Grab Surface Water	7425576
WS-009(Surface)040914 Grab Surface Water	7425577
WS-001(0.5-1.0)040914 Grab Surface Water	7425578
WS-021(Surface)040914 Grab Surface Water	7425579
WS-004(0.5-1.0)040914 Grab Surface Water	7425580

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

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





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Respectfully Submitted,

Katherine a. Klinefelter

Katherine A. Klinefelter Principal Specialist

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🔅 eurofins

Lancaster Laboratories Environmental

Project Name: Mayflower, AR Pipeline Incident LLI Group #: 1466121

General Comments:

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

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

Project specific QC samples are not included in this data set

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

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

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

Analysis Specific Comments: <u>SW-846 8270C SIM, GC/MS Semivolatiles</u>

<u>Sample #s: 7425576</u>

The laboratory did not receive sufficient sample volume to perform

the method QC requirement for MS/MSD or MS/DUP analysis.

<u>Sample #s: 7425579, 7425580</u>

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

Sample #s: 7425577, 7425578

The laboratory did not receive sufficient sample volume to perform the method QC requirement for MS/MSD or MS/DUP analysis. 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 #: 14101wAE026 (Sample number(s): 7425576-7425580)

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7425577, 7425578



Analysis Report

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Sample Description: WS-007(0.5-1.0)040914 Grab Surface Water S20135565 Mayflower, AR Pipeline Incident

LL Sample # WW 7425576 LL Group # 1466121 Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 04/09/2014 15:00 by DF

ExxonMobil PO Box 4592 Houston TX 77210-4592

Submitted: 04/10/2014 09:40 Reported: 04/22/2014 10:09

09007 SDG#: PEM94-01

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.	0.010	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	0.012 J	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.011 J	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.035 J	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.012 J	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.011 J	0.010	0.051	1
08357	Chrysene	218-01-9	0.026 J	0.010	0.051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.051	1
08357	Fluoranthene	206-44-0	0.051 J	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.011 J	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.051	1
08357	Pyrene	129-00-0	0.038 J	0.010	0.051	1
	laboratory did not receive su					

the method QC requirement for MS/MSD or MS/DUP analysis.

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	14101WAE026	04/14/2014 09:09	Brian K Graham	1			
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14101WAE026	04/11/2014 16:30	Seth A Farrier	1			



Analysis Report

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Sample Description: WS-009(Surface)040914 Grab Surface Water S20135565 Mayflower, AR Pipeline Incident

LL Sample # WW 7425577 LL Group # 1466121 Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 04/09/2014 15:10 by DF

ExxonMobil PO Box 4592 Houston TX 77210-4592

Submitted: 04/10/2014 09:40 Reported: 04/22/2014 10:09

09009 SDG#: PEM94-02

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.	0.010	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
The	laboratory did not receive suf					

the method QC requirement for MS/MSD or MS/DUP analysis.

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.

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	14101WAE026	04/14/2014 09:37	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14101WAE026	04/11/2014 16:30	Seth A Farrier	1



Analysis Report

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Sample Description: WS-001(0.5-1.0)040914 Grab Surface Water S20135565 Mayflower, AR Pipeline Incident

LL Sample # WW 7425578 LL Group # 1466121 Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 04/09/2014 15:20 by DF

ExxonMobil PO Box 4592 Houston TX 77210-4592

Submitted: 04/10/2014 09:40 Reported: 04/22/2014 10:09

09001 SDG#: PEM94-03

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	0.051	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
The	laboratory did not receive suf	-	-			

the method QC requirement for MS/MSD or MS/DUP analysis.

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.

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	14101WAE026	04/14/2014 10:05	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14101WAE026	04/11/2014 16:30	Seth A Farrier	1



Analysis Report

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Sample Description: WS-021(Surface)040914 Grab Surface Water S20135565 Mayflower, AR Pipeline Incident

LL Sample # WW 7425579 LL Group # 1466121 Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 04/09/2014 15:30 by DF

ExxonMobil PO Box 4592 Houston TX 77210-4592

Submitted: 04/10/2014 09:40 Reported: 04/22/2014 10:09

09021 SDG#: PEM94-04

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.	0.010	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
The	laboratory did not receive su					

the method QC requirement for MS/MSD or MS/DUP analysis.

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 Method CAT Analysis Name Trial# Batch# Analysis Analyst Dilution Date and Time No. Factor 04/14/2014 10:33 04/11/2014 16:30 08357 PAHs in waters by SIM SW-846 8270C SIM 1 14101WAE026 Brian K Graham 1 10470 BNA Water Extraction SW-846 3510C 1 14101WAE026 Seth A Farrier 1 (SIM)



Analysis Report

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Sample Description: WS-004(0.5-1.0)040914 Grab Surface Water S20135565 Mayflower, AR Pipeline Incident

LL Sample # WW 7425580 LL Group # 1466121 Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 04/09/2014 15:40 by DF

ExxonMobil PO Box 4592 Houston TX 77210-4592

Submitted: 04/10/2014 09:40 Reported: 04/22/2014 10:09

09004 SDG#: PEM94-05*

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

the method QC requirement for MS/MSD or MS/DUP analysis.

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	Analysis Name	Method	Trial#	Batch#	Analysis		Analyst	Dilution		
No.					Date and Ti	me		Factor		
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14101WAE026	04/14/2014	11:01	Brian K Graham	1		
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14101WAE026	04/11/2014	16:30	Seth A Farrier	1		



Analysis Report

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Quality Control Summary

Client Name: ExxonMobil Reported: 04/22/14 at 10:09 AM Group Number: 1466121

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 <u>MDL**</u>	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: 14101WAE026	Sample nu	umber(s): 7	425576-742	25580					
Acenaphthene	N.D.	0.010	0.050	ug/l	100	97	83-119	3	30
Acenaphthylene	N.D.	0.010	0.050	ug/l	99	97	81-130	2	30
Anthracene	N.D.	0.010	0.050	ug/l	106	102	83-125	3	30
Benzo(a) anthracene	N.D.	0.010	0.050	ug/l	102	97	79-122	5	30
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	104	106	80-121	2	30
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	113	116	79-136	2	30
Benzo(q,h,i)perylene	N.D.	0.010	0.050	ug/l	96	98	72-132	2	30
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	101	105	81-131	5	30
Chrysene	N.D.	0.010	0.050	ug/l	99	99	84-118	0	30
Dibenz (a, h) anthracene	N.D.	0.010	0.050	ug/l	93	95	66-133	2	30
Fluoranthene	N.D.	0.010	0.050	ug/l	103	100	84-124	3	30
Fluorene	N.D.	0.010	0.050	ug/l	101	99	82-119	2	30
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	95	97	68-132	2	30
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	96	92	86-130	4	30
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	96	93	81-131	3	30
Naphthalene	N.D.	0.030	0.050	ug/l	95	91	82-122	5	30
Phenanthrene	N.D.	0.030	0.050	ug/l	99	96	83-116	3	30
Pyrene	N.D.	0.010	0.050	ug/l	97	94	78-125	4	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

	Name: PAHs in w mber: 14101WAE02		
	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene- d10
7425576	85	90	92
7425577	73	46*	83
7425578	78	55*	87
7425579	100	101	99
7425580	93	95	92
Blank	92	95	93
LCS	101	112	101
LCSD	98	111	97

*- 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.



62-141

Analysis Report

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Quality Control Summary

Client Name: ExxonMobil Reported: 04/22/14 at 10:09 AM Group Number: 1466121

Surrogate Quality Control

Limits: 59-128

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.

Environmental					ins	struction	is on re	verse s	ide corr	espond	with circled	number	6.						
						4) Matrix				Ar	alyses	Requested							
Facility #/SID	11 .			Τ							Preserva	tion	Code						
Mayflower Pipeline I Site Address Mayflower AR	neident											-					Preservation		
Sile Address Mara House AR					μĄ													Thiosulfat NaOH	te
ExxonMobil PM	Cost Center/AFE		I r		Ground												$S = H_2SO_4$ O =		
ExxonMobil PM Mike Sasm.H Consultant/Office					Gro			5								6			
Consultant/Office				l ac			ي د	SIM									1 #		
A VCR JS Consultant PM	Concultant Dhana #		:	Sediment	Potable	Air	inel									K	realing n	Å	
Consultant PM Steve Barnick 919 302 6799 Sampler D.Frkbrald Matthumby 3 2 Collected B						A	of Containers	270								1	Fredering # Z 754 020 1020 8676	LYD	
Sampler	· ·	3	te		Potable NPDES		ç	8								4	1020 8676	3	
D.Frebrald Matthew	·b.j		Composite		L		0 #												
2)	Collec		Ĕ:	Soil	Water	_	Total # (PAH											
Sample Identification	Date		Ŭ	<u>й</u>		ö		10-				-							
WS-007 (0.5-1.0)040914	4/9/14	1500 X		-+	×		2	Ķ.									······		[
WS-009 (Surfear) 040914	4/9/14	1510 X			X		2	\square				ļ							[
WS-001 (0.5-1.0) 040914	4/9/14	1520 X		-+	X		2	$\left \begin{array}{c} \\ \\ \\ \end{array} \right $				ļ					····		
W5-021 (Surface) 040914		1530 X		-+	<u>×</u>		2	\mathbf{X}				<u> </u>							
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Acct. # 14739

: eurofins

Lancaster Laboratories

ExxonMobil Analysis Request/Chain of Custody

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

The white copy should accompany samples to Eurofins Lancaster Pagetories Environmental. The yellow copy should be retained by the client.

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Lancaster Laboratories Environmental

Client: EXXONMOBIL

Sample Administration Receipt Documentation Log

Doc Log ID:

11376

Group Number(s): 1 4 ゆ ゆ 1 み (

MAYFLOWER PIPELINE **Delivery and Receipt Information** Arrival Timestamp: **Delivery Method:** UPS 04/10/2014 9:40 Number of Packages: Number of Projects: 1 1 State/Province of Origin: AR **Arrival Condition Summary** Total Trip Blank Qty: Shipping Container Sealed: <u>Yes</u> <u>0</u> Trip Blank Type: <u>N/A</u> **Custody Seal Present:** Yes Air Quality Samples Present: No **Custody Seal Intact:** Yes Air Quality Flow Controllers Present: N/A Samples Chilled: Yes Paperwork Enclosed: <u>Yes</u> Flow Controller Quantity: 0 Air Quality Returns: N/A Samples Intact: Yes **Missing Samples:** No Extra Samples: No Discrepancy in Container Qty on COC: <u>No</u> Sample IDs on COC match Containers: Yes Sample Date/Times match COC: Yes VOA Vial Headspace \geq 6mm: N/A VOA IDs (\geq 6mm): N/A

Unpacked by Corey Eshleman (3647) at 11:26 on 04/10/2014

Samples Chilled Details: MAYFLOWER PIPELINE

Thermometer Types: DT = Digital IR = Infrared

<u>Cooler #</u>	Thermometer ID	<u>Raw Temp (°C)</u>	Corrected Temp (°C)	<u>Thermometer Type</u>	Ice Type	Ice Present?	<u>Ice Container</u>	Elevated Temp?
1	DT121	0.5	0.5	DT	Wet	Y	Bagged	Ν
	r							
	General	Comments:						

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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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