Analysis Report

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ANALYTICAL RESULTS

Prepared by: Prepared for:

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

May 21, 2014

Project: Mayflower, AR Pipeline Incident

Submittal Date: 05/09/2014 Group Number: 1473226 SDG: PEM99 PO Number: 4410181435 Release Number: SIXSMITH State of Sample Origin: AR

Client Sample Description	Lancaster Labs (LL) #
WS-007(0.5-1.0)050814 Grab Surface Water	7458063
WS-009(Surface)050814 Grab Surface Water	7458064
WS-001(0.5-1.0)050814 Grab Surface Water	7458065
WS-021(Surface)050814 Grab Surface Water	7458066
WS-004(0.5-1.0)050814 Grab Surface Water	7458067

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
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ELECTRONIC	ARCADIS	Attn: Emily Leamer
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ELECTRONIC	ARCADIS	Attn: Rhiannon Parmalee
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ELECTRONIC	ExxonMobil	Attn: Michael L Sixsmith
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ELECTRONIC	ExxonMobil	Attn: Julie Foster
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ELECTRONIC	ARCADIS	Attn: Kim Abbott
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Analysis Report

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Respectfully Submitted,

Katherine A. Klinefelter Principal Specialist

Katherine a. Klinefelter

(717) 556-7256



Project Name: Mayflower, AR Pipeline Incident LLI Group #: 1473226

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:

SW-846 8270C SIM, GC/MS Semivolatiles

Sample #s: 7458063, 7458065, 7458066, 7458067

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of $\pm 1/2$ 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: dibenz(a,h)anthracene

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

Sample #s: 7458064

The recovery for the sample surrogate(s) is outside the OC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of $\pm 1/2$ 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: dibenz(a,h)anthracene

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

Batch #: 14132WAJ026 (Sample number(s): 7458063-7458067)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window: Dibenz(a,h)anthracene

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 7458064



Analysis Report

14739

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Sample Description: WS-007(0.5-1.0)050814 Grab Surface Water

LL Sample # WW 7458063 S20135565 Mayflower, AR LL Group # 1473226 Pipeline Incident Account

Project Name: Mayflower, AR Pipeline Incident

Collected: 05/08/2014 12:30 by TDF ExxonMobil PO Box 4592

Submitted: 05/09/2014 09:35 Houston TX 77210-4592

Reported: 05/21/2014 09:02

58M07 SDG#: PEM99-01

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	0.043 J	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	0.012 J	0.011	0.057	1
08357	Chrysene	218-01-9	0.028 J	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	0.051 J	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	0.035 J	0.011	0.057	1
The	LCS and/or LCSD recoveries are	e outside the stat	ed QC window			

but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: dibenz(a,h)anthracene

The laboratory did not receive sufficient sample volume to perform 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.

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	14132WAJ026	05/17/2014	02:16	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14132WAJ026	05/13/2014	12:30	William H Saadeh	1



Analysis Report

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Sample Description: WS-009(Surface)050814 Grab Surface Water

S20135565 Mayflower, AR

Pipeline Incident

 ${\tt LL}$ Sample # WW 7458064

LL Group # 1473226 Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 05/08/2014 12:35 by TDF ExxonMobil

PO Box 4592

Houston TX 77210-4592

Submitted: 05/09/2014 09:35 Reported: 05/21/2014 09:02

58M09 SDG#: PEM99-02

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	0.055	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.055	1
08357	Anthracene	120-12-7	N.D.	0.011	0.055	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.055	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.055	1
08357	Benzo(b) fluoranthene	205-99-2	N.D.	0.011	0.055	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.011	0.055	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	0.055	1
08357	Chrysene	218-01-9	N.D.	0.011	0.055	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	0.055	1
08357	Fluoranthene	206-44-0	N.D.	0.011	0.055	1
08357	Fluorene	86-73-7	N.D.	0.011	0.055	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	0.055	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	0.055	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	0.055	1
08357	Naphthalene	91-20-3	N.D.	0.033	0.055	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.055	1
08357	Pyrene	129-00-0	N.D.	0.011	0.055	1

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.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: dibenz(a,h)anthracene

The laboratory did not receive sufficient sample volume to perform 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.

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	14132WAJ026	05/17/2014 02:4	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14132WAJ026	05/13/2014 12:3	William H Saadeh	1



Analysis Report

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Sample Description: WS-001(0.5-1.0)050814 Grab Surface Water

LL Sample # WW 7458065 S20135565 Mayflower, AR LL Group # 1473226 Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 05/08/2014 12:40 by TDF ExxonMobil PO Box 4592

Submitted: 05/09/2014 09:35 Houston TX 77210-4592

Reported: 05/21/2014 09:02

58M01 SDG#: PEM99-03

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.	0.011	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.	0.032	0.054	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.054	1
08357	Pyrene	129-00-0	N.D.	0.011	0.054	1
The	LCS and/or LCSD recoveries are	e outside the stat	ed QC window			

but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: dibenz(a,h)anthracene

The laboratory did not receive sufficient sample volume to perform 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.

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	14132WAJ026	05/17/2014	03:15	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14132WAJ026	05/13/2014	12:30	William H Saadeh	1



Analysis Report

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Sample Description: WS-021(Surface)050814 Grab Surface Water

S20135565 Mayflower, AR

Pipeline Incident

LL Group # 1473226 Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 05/08/2014 12:45 by TDF ExxonMobil PO Box 4592

Houston TX 77210-4592

Submitted: 05/09/2014 09:35 Reported: 05/21/2014 09:02

58M21 SDG#: PEM99-04

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.	0.011	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
The	LCS and/or LCSD recoveries are	e outside the stat	ed QC window			
but	within the marginal exceedance					

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: dibenz(a,h)anthracene

The laboratory did not receive sufficient sample volume to perform 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.

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	14132WAJ026	05/17/2014	03:44	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14132WAJ026	05/13/2014	12:30	William H Saadeh	1



Analysis Report

14739

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Sample Description: WS-004(0.5-1.0)050814 Grab Surface Water

LL Sample # WW 7458067 S20135565 Mayflower, AR LL Group # 1473226 Pipeline Incident Account

Project Name: Mayflower, AR Pipeline Incident

Collected: 05/08/2014 12:50 by TDF ExxonMobil PO Box 4592

Submitted: 05/09/2014 09:35 Houston TX 77210-4592

Reported: 05/21/2014 09:02

58M04 SDG#: PEM99-05*

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	0.052	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.052	1
08357	Anthracene	120-12-7	N.D.	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	0.014 J	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.052	1
08357	Chrysene	218-01-9	N.D.	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.052	1
08357	Fluoranthene	206-44-0	0.021 J	0.010	0.052	1
08357	Fluorene	86-73-7	N.D.	0.010	0.052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.052	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.052	1
08357	Naphthalene	91-20-3	N.D.	0.031	0.052	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.052	1
08357	Pyrene	129-00-0	0.015 J	0.010	0.052	1
The	LCS and/or LCSD recoveries are	e outside the stat	ed QC window			
hut :	within the marginal exceedance	$=$ allowance of $\pm/-$	4 standard			

but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: dibenz(a,h)anthracene

The laboratory did not receive sufficient sample volume to perform 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.

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	14132WAJ026	05/17/2014	04:13	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14132WAJ026	05/13/2014	12:30	William H Saadeh	1

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Quality Control Summary

Client Name: ExxonMobil Group Number: 1473226

Reported: 05/21/14 at 09:02 AM

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: 14132WAJ026	Sample numi	ber(s): 7	458063-745	8067					
Acenaphthene	N.D.	0.010	0.050	ug/l	104	102	83-119	2	30
Acenaphthylene	N.D.	0.010	0.050	ug/l	93	93	81-130	1	30
Anthracene	N.D.	0.010	0.050	ug/l	93	94	83-125	0	30
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	91	90	79-122	1	30
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	97	96	80-121	1	30
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	113	105	79-136	7	30
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	88	79	72-132	10	30
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	100	100	81-131	1	30
Chrysene	N.D.	0.010	0.050	ug/l	96	92	84-118	5	30
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	79	64*	66-133	20	30
Fluoranthene	N.D.	0.010	0.050	ug/l	92	92	84-124	0	30
Fluorene	N.D.	0.010	0.050	ug/l	95	95	82-119	0	30
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	83	72	68-132	13	30
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	96	94	86-130	2	30
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	93	91	81-131	2	30
Naphthalene	N.D.	0.030	0.050	ug/l	98	96	82-122	2	30
Phenanthrene	N.D.	0.030	0.050	ug/l	92	93	83-116	1	30
Pyrene	N.D.	0.010	0.050	ug/l	84	85	78-125	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: 14132WAJ026

Bacen na	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene- d10
7458063	89	88	89
7458064	85	60*	89
7458065	99	89	94
7458066	95	80	93
7458067	94	78	93
Blank	100	110	95
LCS	97	115	101
LCSD	99	109	98

^{*-} 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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Quality Control Summary

Client Name: ExxonMobil Group Number: 1473226

Reported: 05/21/14 at 09:02 AM

Surrogate Quality Control

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

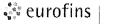
🔅 eurofins

Lancaster Laboratories Environmental Acct. # 14739

For Eurofins Lancaster Laboratories Environmental use only
Group # 1473226 Sample # 74580 63-67
Instructions on reverse side correspond with circled numbers.

1/1

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Sample Administration Receipt Documentation Log

Doc Log ID:

14091

Group Number(s): 1473226

Client: ExxonMobil

Mayflower Pipeline

Delivery and Receipt Information

Delivery Method:

<u>UPS</u>

Arrival Timestamp:

05/09/2014 9:35

Number of Packages:

<u>1</u>

Number of Projects:

1

State/Province of Origin:

<u>AR</u>

Arrival Condition Summary

Shipping Container Sealed:

Yes Ves Total Trip Blank Qty:

<u>0</u>

Custody Seal Present:

<u>Yes</u>

Trip Blank Type:

<u>N/A</u>

Custody Seal Intact:

<u>Yes</u>

Air Quality Samples Present:

<u>No</u> N/A

Samples Chilled:
Paperwork Enclosed:

<u>Yes</u> Yes Air Quality Flow Controllers Present: Flow Controller Quantity:

0

Samples Intact:

Yes

Air Quality Returns:

N/A

Missing Samples:

<u>No</u> No

Extra Samples:

No

Discrepancy in Container Qty on COC: 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 Brandy Barclay (2299) at 11:21 on 05/09/2014

Samples Chilled Details: Mayflower Pipeline

Thermometer Types:

DT = Digital (Temp. Bottle)

IR = Infrared (Surface Temp)

All Temperatures in °C.

Samples Collected Same

Cooler # Thermometer ID

1 DT146

Corrected Temp 0.4

Therm. Type
DT

Ice Type Wet

Ice Present?

Ice Container
Bagged

Day as Receipt?

Elevated Temp?

Ν



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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