

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

ExxonMobil
PO Box 4592
Houston TX 77210-4592

March 19, 2015

Project: Mayflower, AR Pipeline Incident

Submittal Date: 03/10/2015

Group Number: 1543855

SDG: PEO58

PO Number: 4410272923

Release Number: SIXSMITH

State of Sample Origin: AR

Client Sample DescriptionWS-007(0.5-1.0)030915 Grab Surface Water
WS-009(Surface)030915 Grab Surface Water
WS-021(Surface)030915 Grab Surface Water
WS-001(0.5-1.0)030915 Grab Surface Water
WS-004(0.5-1.0)030915 Grab Surface WaterLancaster Labs (LL) #7797348
7797349
7797350
7797351
7797352

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

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

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 Parmelee

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ELECTRONIC ExxonMobil

Attn: Michael L Sixsmith

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ELECTRONIC ExxonMobil

Attn: Julie Foster

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ARCADIS

ARCADIS

ExxonMobil

Attn: Sonal Patil

Attn: Kim Abbott

Attn: Joe Abel

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LL Group #: 1543855

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: 7797348, 7797349, 7797350, 7797351, 7797352

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

Sample Description: WS-007(0.5-1.0)030915 Grab Surface Water
S20135565 Mayflower, AR
Pipeline Incident

LL Sample # WW 7797348
LL Group # 1543855
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/09/2015 11:05 by ZP

ExxonMobil

PO Box 4592

Submitted: 03/10/2015 09:30

Houston TX 77210-4592

Reported: 03/19/2015 10:49

00751 SDG#: PEO58-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.053	1
08357	Acenaphthylene	208-96-8	N.D.	0.011	0.053	1
08357	Anthracene	120-12-7	N.D.	0.011	0.053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	0.053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	0.053	1
08357	Benzo(b)fluoranthene	205-99-2	0.022 J	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	0.017 J	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	0.029 J	0.011	0.053	1
08357	Fluorene	86-73-7	N.D.	0.011	0.053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	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	0.064	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.064	1
08357	Pyrene	129-00-0	0.022 J	0.011	0.053	1

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.

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	15070WAF026	03/16/2015 16:55	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	15070WAF026	03/11/2015 20:00	Nicholas W Shroyer	1

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

Sample Description: WS-009(Surface)030915 Grab Surface Water
S20135565 Mayflower, AR
Pipeline Incident

LL Sample # WW 7797349
LL Group # 1543855
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/09/2015 11:10 by ZP

ExxonMobil

PO Box 4592

Submitted: 03/10/2015 09:30

Houston TX 77210-4592

Reported: 03/19/2015 10:49

009SR SDG#: PEO58-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	0.054	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	0.012 J	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	0.065	1
08357	Phenanthrene	85-01-8	N.D.	0.032	0.065	1
08357	Pyrene	129-00-0	N.D.	0.011	0.054	1

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.

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	15070WAF026	03/16/2015 17:23	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	15070WAF026	03/11/2015 20:00	Nicholas W Shroyer	1

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

Sample Description: WS-021(Surface)030915 Grab Surface Water
S20135565 Mayflower, AR
Pipeline Incident

LL Sample # WW 7797350
LL Group # 1543855
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/09/2015 11:25 by ZP

ExxonMobil

PO Box 4592

Submitted: 03/10/2015 09:30

Houston TX 77210-4592

Reported: 03/19/2015 10:49

021SR SDG#: PEO58-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.051	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.051	1
08357	Anthracene	120-12-7	N.D.	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.014 J	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.051	1
08357	Chrysene	218-01-9	0.012 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	0.020 J	0.010	0.051	1
08357	Fluorene	86-73-7	N.D.	0.010	0.051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	0.051	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	0.051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	0.051	1
08357	Naphthalene	91-20-3	N.D.	0.030	0.061	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.061	1
08357	Pyrene	129-00-0	0.014 J	0.010	0.051	1

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.

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	15070WAF026	03/16/2015 17:51	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	15070WAF026	03/11/2015 20:00	Nicholas W Shroyer	1

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

Sample Description: WS-001(0.5-1.0)030915 Grab Surface Water
S20135565 Mayflower, AR
Pipeline Incident

LL Sample # WW 7797351
LL Group # 1543855
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/09/2015 11:20 by ZP

ExxonMobil

PO Box 4592

Submitted: 03/10/2015 09:30

Houston TX 77210-4592

Reported: 03/19/2015 10:49

00105 SDG#: PEO58-04

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.010	0.052	1
08357	Acenaphthylene	208-96-8	N.D.	0.010	0.052	1
08357	Anthracene	120-12-7	N.D.	0.010	0.052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	0.052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	0.052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	0.052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	0.052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	0.052	1
08357	Chrysene	218-01-9	N.D.	0.010	0.052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.052	1
08357	Fluoranthene	206-44-0	0.018 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	0.063	1
08357	Phenanthrene	85-01-8	N.D.	0.031	0.063	1
08357	Pyrene	129-00-0	0.011 J	0.010	0.052	1

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.

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	15070WAF026	03/16/2015 18:18	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	15070WAF026	03/11/2015 20:00	Nicholas W Shroyer	1

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

Sample Description: WS-004(0.5-1.0)030915 Grab Surface Water
S20135565 Mayflower, AR
Pipeline Incident

LL Sample # WW 7797352
LL Group # 1543855
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 03/09/2015 11:30 by ZP

ExxonMobil

PO Box 4592

Submitted: 03/10/2015 09:30

Houston TX 77210-4592

Reported: 03/19/2015 10:49

00405 SDG#: PEO58-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270C SIM	ug/l	ug/l	ug/l	
08357	Acenaphthene	83-32-9	N.D.	0.011	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	0.012 J	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	0.012 J	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	0.025 J	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	0.066	1
08357	Phenanthrene	85-01-8	N.D.	0.033	0.066	1
08357	Pyrene	129-00-0	0.018 J	0.011	0.055	1

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.

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	15070WAF026	03/16/2015 18:46	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	15070WAF026	03/11/2015 20:00	Nicholas W Shroyer	1

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

Quality Control Summary

Client Name: ExxonMobil
Reported: 03/19/2015 10:49

Group Number: 1543855

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 15070WAF026	Sample number(s): 7797348-7797352								
Acenaphthene	N.D.	0.010	0.050	ug/l	82	83	76-139	2	30
Acenaphthylene	N.D.	0.010	0.050	ug/l	87	88	67-120	1	30
Anthracene	N.D.	0.010	0.050	ug/l	92	92	72-128	0	30
Benzo(a)anthracene	N.D.	0.010	0.050	ug/l	90	88	71-127	1	30
Benzo(a)pyrene	N.D.	0.010	0.050	ug/l	81	83	64-132	4	30
Benzo(b)fluoranthene	N.D.	0.010	0.050	ug/l	90	95	71-139	5	30
Benzo(g,h,i)perylene	N.D.	0.010	0.050	ug/l	67	76	49-140	14	30
Benzo(k)fluoranthene	N.D.	0.010	0.050	ug/l	76	82	63-136	7	30
Chrysene	N.D.	0.010	0.050	ug/l	81	82	72-132	2	30
Dibenz(a,h)anthracene	N.D.	0.010	0.050	ug/l	48	58	37-142	18	30
Fluoranthene	N.D.	0.010	0.050	ug/l	90	89	76-121	2	30
Fluorene	N.D.	0.010	0.050	ug/l	89	90	71-124	1	30
Indeno(1,2,3-cd)pyrene	N.D.	0.010	0.050	ug/l	61	70	45-136	14	30
1-Methylnaphthalene	N.D.	0.010	0.050	ug/l	75	76	65-122	1	30
2-Methylnaphthalene	N.D.	0.010	0.050	ug/l	72	72	59-124	1	30
Naphthalene	N.D.	0.030	0.060	ug/l	75	75	69-119	1	30
Phenanthrene	N.D.	0.030	0.060	ug/l	90	89	75-121	2	30
Pyrene	N.D.	0.010	0.050	ug/l	84	83	70-124	2	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: 15070WAF026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7797348	70	72	60
7797349	81	83	68
7797350	80	87	68
7797351	80	65	65
7797352	60	35	53
Blank	92	100	75
LCS	95	98	76
LCSD	97	103	76
Limits:	56-134	26-158	52-127

*- Outside of specification

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

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

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

Quality Control Summary

Client Name: ExxonMobil
Reported: 03/19/2015 10:49

Group Number: 1543855

Surrogate Quality Control

*- 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



Lancaster Laboratories
Environmental

Acct. #

14739 Group # 1543855 Sample # 77917348-52

Instructions on reverse side correspond with circled numbers.

Client Information

Facility #/SID	Mayflower Pipeline Incident		
Site Address	Mayflower AR		
ExxonMobil PM	Cost Center/A/E		
Consultant/Office	Mike Sixsmith		
Consultant PM	Arealis		
Consultant Phone #	Steve Barnick		
Sampler	Zac Powers		

Analyses Requested

Preservation Code

5 8270 PAHS SIM

6

Matrix

<input type="checkbox"/> Sediment	<input type="checkbox"/> Soil	<input type="checkbox"/> Water	<input type="checkbox"/> Oil
<input type="checkbox"/> Ground	<input type="checkbox"/> Potable	<input type="checkbox"/> NPDES	<input type="checkbox"/> Air
<input checked="" type="checkbox"/> Surface			

3

Grab

Composite

Time

Date

Sample Identification

03-09-15

03-09-15

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03-09-15

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03-09-15

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7

Turnaround Time Requested (TAT) (please circle)

Standard

5 day

48 hour

72 hour

4 day

24 hour

72 hour

4 day

24 hour

72 hour

4 day

24 hour

72 hour

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24 hour

72 hour

8

Data Package (circle if required)

Type I - Full

Type VI (Raw Data)

NJ Reduced

Other

EDD (circle if required)

Locus EIM (default)

Other

UPS

FedEx

Other

Temperature Upon Receipt

29 °C

Custody Seals Intact?

Yes

No

Received by

Date

Time

Received by

Date

Time

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Preservation Codes

H = HCl

T = Thiosulfate

N = HNO₃

B = NaOH

S = H₂SO₄

O = Other

Remarks

6

Collection times per labels + Zac Powers

KAK 1885, 3/10/15

7

Turnaround Time Requested (TAT) (please circle)

Standard

5 day

48 hour

72 hour

4 day

24 hour

72 hour

4 day

24 hour

72 hour

4 day

24 hour

72 hour

4 day

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72 hour

8

Data Package (circle if required)

Type I - Full

Type VI (Raw Data)

NJ Reduced

Other

EDD (circle if required)

Locus EIM (default)

Other

UPS

FedEx

Other

Temperature Upon Receipt

29 °C

Custody Seals Intact?

Yes

1543855

Katherine Klinefelter

From: Katherine Klinefelter
Sent: Tuesday, March 10, 2015 4:10 PM
To: 'Powers, Zachary'
Subject: RE: Mayflower COC and tracking - 1543855.

We will revise the request on the COC to PAHs 8270C SIM and also revise the collection times on the COC and entry to match the labels. Please update the yellow copy of the COC that you retained. Thanks.

From: Powers, Zachary [<mailto:zpowers@croworld.com>]
Sent: Tuesday, March 10, 2015 3:18 PM
To: Katherine Klinefelter
Subject: Re: Mayflower COC and tracking - 1543855.

Bottles are correct.

Thanks

Sent from my iPhone

On Mar 10, 2015, at 2:07 PM, "Katherine Klinefelter" <KatherineKlinefelter@eurofinsus.com> wrote:

Collection time discrepancies were noted.
For WS-021, COC lists 1120. The bottle labels list 1125.
For WS-001, COC lists 1125. The bottle labels list 1120.
Which times are correct?

From: Powers, Zachary [<mailto:zpowers@croworld.com>]
Sent: Monday, March 09, 2015 5:31 PM
To: Katherine Klinefelter
Subject: RE: Mayflower COC and tracking

Yes. thank you

Best,

Zac Powers
CRA Inc.
501.850.6610
501.224.1926

From: Katherine Klinefelter [<mailto:KatherineKlinefelter@eurofinsus.com>]
Sent: Monday, March 09, 2015 4:14 PM
To: Powers, Zachary
Subject: RE: Mayflower COC and tracking

Hi Zac,

COC is unclear. Are PAHs still to be run by 8270C SIM?

1543855

Thanks,
Kathy

From: Powers, Zachary [<mailto:zpowers@craworld.com>]
Sent: Monday, March 09, 2015 5:05 PM
To: Katherine Klinefelter; !US19_SA Env Entry
Cc: Patil, Sonal
Subject: Mayflower COC and tracking

Katherine,

See attached COC and tracking from this week's surface water sampling.


Sonal – I'll have your field notes and logs tomorrow.

Thanks,

Zac Powers
Conestoga-Rovers & Associates (CRA)
11719 Hinson Rd, Ste 100
Little Rock, AR 72212

Office: 501- 224-1926
Fax: 501-224-2313
Cell: 501-850-6610

zpowers@craworld.com
www.craworld.com

Think before you print 

Perform every task the safe way, the right way, every time!

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CRA and GHD have merged! To learn more, visit www.CRAworld.com/ghd

Notify us [here](#) to report this email as spam.



Sample Administration Receipt Documentation Log

Doc Log ID: 59518
Group Number(s): 1543855

Client: Mayflower Pipeline

Delivery and Receipt Information

Delivery Method: UPS Arrival Timestamp: 03/10/2015 9:30
Number of Packages: 1 Number of Projects: 1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace \geq 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Timothy Cubberley (6520) at 10:24 on 03/10/2015

Samples Chilled Details

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

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	2.9	DT	Wet	Y	Bagged	N

Sample Date/Time Discrepancy Details

Sample ID on COC	Date/Time on Label	Comments
WS-021(Surface)030915	3/10/2015 11:25	Time on the CoC is marked at 11:20.
WS-001(0.5-1.0)030915	3/10/2015 11:20	Time on the CoC is marked at 11:25.

Explanation of Symbols and Abbreviations

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

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and the $<$ Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

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

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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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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