

Lancaster Laboratories Environmental

Analysis Report

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

Partial Report - Page 1 of 1

Sample Description: WS-007(0.5-1.0)072613 Grab Surface Water

LL Sample # WW 7142305 LL Group # 1407334 Mayflower, AR Pipeline Incident Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 07/26/2013 13:20 by JW ExxonMobil

Mobil Pipeline Company

Submitted: 07/27/2013 09:35 PO Box 4416

Houston TX 77210-4416 Reported: 07/31/2013 19:06

0705-SDG#: PEJ49-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles SW-846	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	0.011 J	0.010	0.051	1
08357	Anthracene	120-12-7	0.020 J	0.010	0.051	1
08357	Benzo(a)anthracene	56-55-3	0.021 J	0.010	0.051	1
08357	Benzo(a)pyrene	50-32-8	0.022 J	0.010	0.051	1
08357	Benzo(b)fluoranthene	205-99-2	0.052	0.010	0.051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.022 J	0.010	0.051	1
08357	Benzo(k)fluoranthene	207-08-9	0.032 J	0.010	0.051	1
08357	Chrysene	218-01-9	0.048 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	0.058	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	0.024 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.	0.030	0.051	1
08357	Phenanthrene	85-01-8	N.D.	0.030	0.051	1
08357	Pyrene	129-00-0	0.051	0.010	0.051	1

General Sample Comments

Laboratory Sample Analysis Record

CAT	Analysis Name	Method	Trial#	Batch#	Analysis	Analyst	Dilution
No.					Date and Time		Factor
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13209WAA026	07/30/2013 06:46	Brian K Graham	1

ExxonMobil Analysis Request/Chain of Custody

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The white copy should accompany samples to Lancaster Laboratories. The yellow copy should be retained by the client.

ExxonMobil Analysis Request/Chain of Custody

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Other Eurofins Lancaster Laboratories, Inc. • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 Issued by Dept. 40 Management	Other	Curofine Lo	ncaeter Laborato	ries Inc • 1	2425	New Holls	and P	ike. I	ancas	ster, PA	17601	• 717-0	556-2300			***	Issued by De	

Carolyn M. Cyms A# 14739, Gr# 1407334, Sample 7142293-312

From: Parmelee, Rhiannon [Rhiannon.Parmelee@arcadis-us.com]

Sent: Saturday, July 27, 2013 2:34 PM

To: Kathy Klinefelter; Van Aller, Hans; Mott, Lyndi; Barrick, Stephen; Brewer, Stacey; Kull, Valerie; SA Env

Entry; Capria, Dennis; Rachel L. Kreamer; McKenzie, Mary; Chandler, Jennifer

Cc: Molina, Joe; Lipka, Shelby; Pritchard, Jamie

Subject: RE: Mayflower COCs Surface water sampling 072613

Email rush results is fine (option #2).

Rhiannon Parmelee ARCADIS Office (303 471 3904) Cell (206 914 9625)

----- Original message -----

From: Kathy Klinefelter < KKlinefelter@lancasterlabs.com>

Date: 07/27/2013 1:13 PM (GMT-06:00)

To: "Parmelee, Rhiannon" < Rhiannon. Parmelee@arcadis-us.com>, "Van Aller, Hans"

<Hans.VanAller@arcadis-us.com>,"Mott, Lyndi" <Lyndi.Mott@arcadis-us.com>,"Barrick, Stephen"

<Stephen.Barrick@arcadis-us.com>,"Brewer, Stacey" <Stacey.Brewer@arcadis-us.com>,"Kull,

Valerie" <Valerie.Kull@arcadis-us.com>,SA Env Entry <SAEnvEntry@lancasterlabs.com>,"Capria,

Dennis" < Dennis. Capria@arcadis-us.com>, "Rachel L. Kreamer"

<RKreamer@lancasterlabs.com>,"McKenzie, Mary" <Mary.McKenzie@arcadis-us.com>,"Chandler,
Jennifer" <Jennifer.Chandler@arcadis-us.com>

Cc: "Molina, Joe" <Joe.Molina@arcadis-us.com>, "Lipka, Shelby" <Shelby.Lipka@arcadis-

us.com>,"Pritchard, Jamie" < Jamie.Pritchard@arcadis-us.com>

Subject: RE: Mayflower COCs Surface water sampling 072613

Does WS-007(0.5-1.0)072613 need to be voided and entered in its own group in order to issue the final report and EDD in 24 hours, or can we leave it entered with the rest of the 5 day group, email rush results for the sample on Tuesday, and then have it included in the final report and EDD issued when the 5 day TAT samples report?

From: Parmelee, Rhiannon [mailto:Rhiannon.Parmelee@arcadis-us.com]

Sent: Saturday, July 27, 2013 2:08 PM

To: Kathy Klinefelter; Van Aller, Hans; Mott, Lyndi; Barrick, Stephen; Brewer, Stacey; Kull, Valerie; SA Env Entry;

Capria, Dennis; Rachel L. Kreamer; McKenzie, Mary; Chandler, Jennifer

Cc: Molina, Joe; Lipka, Shelby; Pritchard, Jamie

Subject: RE: Mayflower COCs Surface water sampling 072613

Yes, that is the correct sample id. The rest of the samples would be 5 day TAT. Thank you.

Rhiannon Parmelee ARCADIS Office (303 471 3904) Cell (206 914 9625)

A# 14739, Gr# 1407334, Saryler 1142293-312

----- Original message -----

From: Kathy Klinefelter < KKlinefelter@lancasterlabs.com>

Date: 07/27/2013 11:59 AM (GMT-06:00)

To: "Parmelee, Rhiannon" < Rhiannon. Parmelee@arcadis-us.com>, "Van Aller, Hans"

<Hans.VanAller@arcadis-us.com>,"Mott, Lyndi" <Lyndi.Mott@arcadis-us.com>,"Barrick, Stephen"

<Stephen.Barrick@arcadis-us.com>,"Brewer, Stacey" <Stacey.Brewer@arcadis-us.com>,"Kull,

Valerie" <Valerie.Kull@arcadis-us.com>,SA Env Entry <SAEnvEntry@lancasterlabs.com>,"Capria,

Dennis" <Dennis.Capria@arcadis-us.com>,"Rachel L. Kreamer"

<RKreamer@lancasterlabs.com>,"McKenzie, Mary" <Mary.McKenzie@arcadis-us.com>,"Chandler,

Jennifer" < Jennifer. Chandler@arcadis-us.com>

Cc: "Molina, Joe" <Joe.Molina@arcadis-us.com>, "Lipka, Shelby" <Shelby.Lipka@arcadis-

us.com>, "Pritchard, Jamie" < Jamie. Pritchard@arcadis-us.com>

Subject: RE: Mayflower COCs Surface water sampling 072613

Please confirm full sample ID for 24 hour request is WS-007(0.5-1.0)072613. The rest of the samples in the surface water group will still be on 5 day TAT, but we will try to have results for this one sample on Tuesday 7/30.

From: Parmelee, Rhiannon [mailto:Rhiannon.Parmelee@arcadis-us.com]

Sent: Saturday, July 27, 2013 8:49 AM

To: Kathy Klinefelter; Van Aller, Hans; Mott, Lyndi; Barrick, Stephen; Brewer, Stacey; Kull, Valerie; SA Env Entry;

Capria, Dennis; Rachel L. Kreamer; McKenzie, Mary; Chandler, Jennifer

Cc: Molina, Joe; Lipka, Shelby; Pritchard, Jamie

Subject: RE: Mayflower COCs Surface water sampling 072613

Kathy -

The attached COC was a different from the "Downstream Areas Remedial Sampling Plan (DARSP)" that is kicking off today. For reference, we are using the letters "DA" for sediment/soils/SW associated with that sampling event. For example, a sediment sample ID will look like this: SED-DA-033(0.5-1.0). Obviously, that's more important on our end, but would help you understand when the samples are associated with that event.

And I am task managing both the daily surface water sampling (more from the office) and the DARSP sampling. DARSP a ridiculous acronym, but helps us keep that sampling separate from the other activities.

As for the additional cove samples collected yesterday, those should be the same analytes as the daily surface water sampling (meaning, don't worry about TSS or the alkylated PAHs). And I forgot yesterday when Hans asked me, but is it too late to move WS-007(0.5-1.0) from the 5-day TAT time to the 24-hour TAT. We had asked for 24-hour TAT because the client would like the two SH samples back as soon as possible, realizing that would be Tuesday because of the weekend.

And per Shelby's email yesterday regarding the weekend sampling, that list does include the sediment sampling for the DARSP. We will be starting with sediment sampling this week. (the only sediment sampling currently underway is associated with the DARSP sampling event).

Does this make more sense? I'm out in Arkansas through today and tomorrow. I'm going to attempt to catch up on emails from yesterday – but if you don't hear back on something specific, please re-send.

Rhiannon Att 14739, Gr# 1407334, Samples 7142293-312

From: Kathy Klinefelter [mailto:KKlinefelter@lancasterlabs.com]

Sent: Friday, July 26, 2013 10:57 PM

To: Van Aller, Hans; Mott, Lyndi; Barrick, Stephen; Brewer, Stacey; Kull, Valerie; SA Env Entry; Capria, Dennis;

Rachel L. Kreamer; McKenzie, Mary; Chandler, Jennifer

Cc: Molina, Joe; Lipka, Shelby; Parmelee, Rhiannon; Pritchard, Jamie **Subject:** RE: Mayflower COCs Surface water sampling 072613

Please clarify. Is the attached cove COC part of the Downstream Cove project, or from another cove? Are the 24 hour cove surface water results needed Monday or Tuesday? Tuesday would be the due date for 24 hours = 1 business day rush TAT. Also, please confirm the analyses requested for the cove surface water samples. The COC requests PAHs by SIM, but does not request TSS. Was TSS dropped for this set of cove samples and PAHs SIM added? Our understanding was that Lancaster would not be analyzing any Downstream Cove samples for PAHs SIM and that B&B would be analyzing all cove surface water samples for Alkylated PAHs. Thanks!

From: Van Aller, Hans [mailto:Hans.VanAller@arcadis-us.com]

Sent: Friday, July 26, 2013 9:19 PM

To: Kathy Klinefelter; Mott, Lyndi; Barrick, Stephen; Brewer, Stacey; Kull, Valerie; SA Env Entry; Capria, Dennis;

Rachel L. Kreamer; McKenzie, Mary; Chandler, Jennifer

Cc: Molina, Joe; Lipka, Shelby; Parmelee, Rhiannon; Pritchard, Jamie

Subject: Mayflower COCs Surface water sampling 072613

Hello All

Attached are the COCs from today's surface water sampling activities.

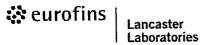
Hans H. van Aller IV | Field Tech 3 | <u>Hans.VanAller@arcadis-us.com</u>
ARCADIS U.S., Inc. | 630 Plaza Drive, Suite 100 | Highlands Ranch, CO 80129
T. 720.344.3500 | M.720.635.0173| F. 720.344.3535

www.arcadis-us.com

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G-1407334 Environmental Sample Administration Receipt Documentation Log

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Time o	of Receipt: _	0935		* Custody	seal was inta	ct unless otherwise	noted in the				
Source Code: 50					Package: Chilled Not Chi						
Temperature of Shipping Containers											
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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3		1,4					SW				
4		2.3					20				
5		0.7					SW				
6		3.0	W T	V	U	V	SW				
	Number of Trip Blanks received NOT listed on chain of custody: Paperwork Discrepancy/Unpacking Problems:										
Unpac	Unpacker Signature/Emp#: 7/21/13 1035										

Issued by Dept. 6042 Management



(7-1407334 Environmental Sample Administration Receipt Documentation Log

													
Client/	Project:	Exxonp	106.	Shipping Container Sealed: YES NO									
Date of Receipt:		7/2	1/13	Custody	/ Seal Pres	sent * · YE	S NO						
Time o	of Receipt:	<u> </u>	35	Custody Seal Present *: YES NO * Custody seal was intact unless otherwise noted in the									
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Course				Package	e :	(Chilled	Not Chilled						
Temperature of Shipping Containers													
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						
17	DT/31	0.4	T6	WI	7	B	5W + 5H						
<i>1</i> 8		6,2					SW						
3	/												
4													
5													
6													
Number	of Trip Blank	s received N	OT listed on chain	of custody:	Ž	/	The state of the s						
Number of Trip Blanks received <u>NOT</u> listed on chain of custody:													
Jnpacko	Inpacker Signature/Emp#: Date/Time: 7/27/13 /035												



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 weightbasis
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	E	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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