

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

October 18, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 10/14/2013
Group Number: 1426121
SDG: PEM14
PO Number: B0086003.1301
State of Sample Origin: AR

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
WS-014(1.5-2.0)101213 Filt Grab Surface Water	7235537
WS-014(5.5-6.0)101213 Filt Grab Surface Water	7235538
WS-012(1.5-2.0)101213 Filt Grab Surface Water	7235539
WS-012(5.0-5.5)101213 Filt Grab Surface Water	7235540
WS-010(1.5-2.0)101213 Filt Grab Surface Water	7235541
WS-010(3.5-4.0)101213 Filt Grab Surface Water	7235542
WS-006(0.5-1.0)101213 Filt Grab Surface Water	7235543
WS-005(Surface)101213 Filt Grab Surface Water	7235544
WS-002(Surface)101213 Filt Grab Surface Water	7235545
WS-011(1.5-2.0)101213 Filt Grab Surface Water	7235546
WS-011(5.0-5.5)101213 Filt Grab Surface Water	7235547
WS-018(Surface)101213 Filt Grab Surface Water	7235548
WS-003(Surface)101213 Filt Grab Surface Water	7235549
WS-007(0.5-1.0)101213 Filt Grab Surface Water	7235550
WS-001(0.5-1.0)101213 Filt Grab Surface Water	7235551
WS-EB-89-101213 Filt Grab Water	7235552
DUP-WS-101-101213 Filt Grab Surface Water	7235553

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 COPY TO	ARCADIS	Attn: Emily Leamer

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ELECTRONIC	ARCADIS	Attn: Rhiannon Parmalee
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ELECTRONIC	ARCADIS	Attn: Jamie Pritchard
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ELECTRONIC	ExxonMobil	Attn: Michael L Sixsmith
COPY TO		
ELECTRONIC	ExxonMobil	Attn: Julie Foster
COPY TO		

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1426121

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:

No additional comments are necessary.

Sample Description: WS-014(1.5-2.0)101213 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7235537
LL Group # 1426121
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/12/2013 10:20 by HVA

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

Submitted: 10/14/2013 11:05

Reported: 10/18/2013 10:57

2F141 SDG#: PEM14-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0179	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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
07035	Arsenic	SW-846 6010B	1	132871848009	10/17/2013 05:36	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132871848009	10/17/2013 05:36	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132871848009	10/17/2013 05:36	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132871848009	10/17/2013 05:36	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132871848009	10/17/2013 21:24	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132871848009	10/17/2013 05:36	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132871848009	10/17/2013 21:24	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132871848009	10/17/2013 05:36	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132871848009	10/17/2013 05:36	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132875713004	10/16/2013 08:26	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132871848009	10/15/2013 07:08	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132875713004	10/15/2013 15:20	Nelli S Markaryan	1

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

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Sample Description: WS-014(5.5-6.0)101213 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7235538
LL Group # 1426121
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/12/2013 10:30 by HVA

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

Submitted: 10/14/2013 11:05

Reported: 10/18/2013 10:57

2F145 SDG#: PEM14-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0177	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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
07035	Arsenic	SW-846 6010B	1	132871848009	10/17/2013 05:40	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132871848009	10/17/2013 05:40	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132871848009	10/17/2013 05:40	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132871848009	10/17/2013 05:40	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132871848009	10/17/2013 21:28	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132871848009	10/17/2013 05:40	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132871848009	10/17/2013 21:28	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132871848009	10/17/2013 05:40	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132871848009	10/17/2013 05:40	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132875713004	10/16/2013 08:28	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132871848009	10/15/2013 07:08	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132875713004	10/15/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-012(1.5-2.0)101213 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7235539
LL Group # 1426121
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/12/2013 10:40 by HVA

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

Submitted: 10/14/2013 11:05

Reported: 10/18/2013 10:57

2F121 SDG#: PEM14-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0173	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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
07035	Arsenic	SW-846 6010B	1	132871848009	10/17/2013 05:51	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132871848009	10/17/2013 05:51	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132871848009	10/17/2013 05:51	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132871848009	10/17/2013 05:51	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132871848009	10/17/2013 21:40	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132871848009	10/17/2013 05:51	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132871848009	10/17/2013 21:40	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132871848009	10/17/2013 05:51	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132871848009	10/17/2013 05:51	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132875713004	10/16/2013 08:30	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132871848009	10/15/2013 07:08	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132875713004	10/15/2013 15:20	Nelli S Markaryan	1

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

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Sample Description: WS-012(5.0-5.5)101213 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7235540
LL Group # 1426121
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/12/2013 10:50 by HVA

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

Submitted: 10/14/2013 11:05

Reported: 10/18/2013 10:57

2F125 SDG#: PEM14-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0175	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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
07035	Arsenic	SW-846 6010B	1	132871848009	10/17/2013 05:55	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132871848009	10/17/2013 05:55	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132871848009	10/17/2013 05:55	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132871848009	10/17/2013 05:55	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132871848009	10/17/2013 21:44	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132871848009	10/17/2013 05:55	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132871848009	10/17/2013 21:44	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132871848009	10/17/2013 05:55	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132871848009	10/17/2013 05:55	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132875713004	10/16/2013 08:32	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132871848009	10/15/2013 07:08	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132875713004	10/15/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-010(1.5-2.0)101213 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7235541
LL Group # 1426121
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/12/2013 11:00 by HVA

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

Submitted: 10/14/2013 11:05

Reported: 10/18/2013 10:57

2F101 SDG#: PEM14-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0196	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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
07035	Arsenic	SW-846 6010B	1	132871848009	10/17/2013 05:59	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132871848009	10/17/2013 05:59	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132871848009	10/17/2013 05:59	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132871848009	10/17/2013 05:59	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132871848009	10/17/2013 21:48	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132871848009	10/17/2013 05:59	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132871848009	10/17/2013 21:48	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132871848009	10/17/2013 05:59	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132871848009	10/17/2013 05:59	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132875713004	10/16/2013 08:39	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132871848009	10/15/2013 07:08	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132875713004	10/15/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-010(3.5-4.0)101213 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7235542
LL Group # 1426121
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/12/2013 11:10 by HVA

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

Submitted: 10/14/2013 11:05

Reported: 10/18/2013 10:57

2F103 SDG#: PEM14-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0201	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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
07035	Arsenic	SW-846 6010B	1	132871848009	10/17/2013 06:03	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132871848009	10/17/2013 06:03	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132871848009	10/17/2013 06:03	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132871848009	10/17/2013 06:03	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132871848009	10/17/2013 21:52	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132871848009	10/17/2013 06:03	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132871848009	10/17/2013 21:52	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132871848009	10/17/2013 06:03	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132871848009	10/17/2013 06:03	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132875713004	10/16/2013 08:41	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132871848009	10/15/2013 07:08	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132875713004	10/15/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-006(0.5-1.0)101213 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7235543
LL Group # 1426121
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/12/2013 11:30 by HVA

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

Submitted: 10/14/2013 11:05

Reported: 10/18/2013 10:57

2F060 SDG#: PEM14-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0201	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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
07035	Arsenic	SW-846 6010B	1	132871848009	10/17/2013 05:13	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132871848009	10/17/2013 05:13	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132871848009	10/17/2013 05:13	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132871848009	10/17/2013 05:13	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132871848009	10/17/2013 20:59	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132871848009	10/17/2013 05:13	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132871848009	10/17/2013 20:59	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132871848009	10/17/2013 05:13	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132871848009	10/17/2013 05:13	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132875713004	10/16/2013 08:43	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132871848009	10/15/2013 07:08	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132875713004	10/15/2013 15:20	Nelli S Markaryan	1

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

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Sample Description: WS-005 (Surface)101213 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7235544
LL Group # 1426121
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/12/2013 12:00 by HVA

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

Submitted: 10/14/2013 11:05

Reported: 10/18/2013 10:57

2F05S SDG#: PEM14-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0215	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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
07035	Arsenic	SW-846 6010B	1	132871848009	10/17/2013 06:07	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132871848009	10/17/2013 06:07	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132871848009	10/17/2013 06:07	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132871848009	10/17/2013 06:07	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132871848009	10/17/2013 21:56	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132871848009	10/17/2013 06:07	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132871848009	10/17/2013 21:56	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132871848009	10/17/2013 06:07	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132871848009	10/17/2013 06:07	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132875713004	10/16/2013 08:45	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132871848009	10/15/2013 07:08	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132875713004	10/15/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-002 (Surface)101213 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7235545
LL Group # 1426121
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/12/2013 12:10 by HVA

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

Submitted: 10/14/2013 11:05

Reported: 10/18/2013 10:57

2F02S SDG#: PEM14-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0183	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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
07035	Arsenic	SW-846 6010B	1	132871848009	10/17/2013 06:11	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132871848009	10/17/2013 06:11	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132871848009	10/17/2013 06:11	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132871848009	10/17/2013 06:11	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132871848009	10/17/2013 22:00	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132871848009	10/17/2013 06:11	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132871848009	10/17/2013 22:00	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132871848009	10/17/2013 06:11	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132871848009	10/17/2013 06:11	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132875713004	10/16/2013 08:47	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132871848009	10/15/2013 07:08	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132875713004	10/15/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-011(1.5-2.0)101213 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7235546
LL Group # 1426121
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/12/2013 12:20 by HVA

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

Submitted: 10/14/2013 11:05

Reported: 10/18/2013 10:57

2F111 SDG#: PEM14-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0189	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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
07035	Arsenic	SW-846 6010B	1	132871848009	10/17/2013 06:14	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132871848009	10/17/2013 06:14	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132871848009	10/17/2013 06:14	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132871848009	10/17/2013 06:14	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132871848009	10/17/2013 22:04	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132871848009	10/17/2013 06:14	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132871848009	10/17/2013 22:04	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132871848009	10/17/2013 06:14	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132871848009	10/17/2013 06:14	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132875713004	10/16/2013 08:49	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132871848009	10/15/2013 07:08	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132875713004	10/15/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-011(5.0-5.5)101213 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7235547
LL Group # 1426121
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/12/2013 12:30 by HVA

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

Submitted: 10/14/2013 11:05

Reported: 10/18/2013 10:57

2F115 SDG#: PEM14-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0200	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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
07035	Arsenic	SW-846 6010B	1	132871848009	10/17/2013 06:18	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132871848009	10/17/2013 06:18	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132871848009	10/17/2013 06:18	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132871848009	10/17/2013 06:18	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132871848009	10/17/2013 22:08	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132871848009	10/17/2013 06:18	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132871848009	10/17/2013 22:08	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132871848009	10/17/2013 06:18	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132871848009	10/17/2013 06:18	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132875713004	10/16/2013 08:51	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132871848009	10/15/2013 07:08	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132875713004	10/15/2013 15:20	Nelli S Markaryan	1

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

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Sample Description: WS-018 (Surface) 101213 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7235548
LL Group # 1426121
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/12/2013 12:50 by HVA

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

Submitted: 10/14/2013 11:05

Reported: 10/18/2013 10:57

2F18S SDG#: PEM14-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0234	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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
07035	Arsenic	SW-846 6010B	1	132871848009	10/17/2013 06:22	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132871848009	10/17/2013 06:22	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132871848009	10/17/2013 06:22	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132871848009	10/17/2013 06:22	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132871848009	10/17/2013 22:12	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132871848009	10/17/2013 06:22	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132871848009	10/17/2013 22:12	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132871848009	10/17/2013 06:22	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132871848009	10/17/2013 06:22	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132875713004	10/16/2013 08:53	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132871848009	10/15/2013 07:08	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132875713004	10/15/2013 15:20	Nelli S Markaryan	1

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

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Sample Description: WS-003 (Surface)101213 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7235549
LL Group # 1426121
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/12/2013 13:00 by HVA

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

Submitted: 10/14/2013 11:05

Reported: 10/18/2013 10:57

2F03S SDG#: PEM14-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0212	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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
07035	Arsenic	SW-846 6010B	1	132871848009	10/17/2013 06:26	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132871848009	10/17/2013 06:26	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132871848009	10/17/2013 06:26	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132871848009	10/17/2013 06:26	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132871848009	10/17/2013 22:16	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132871848009	10/17/2013 06:26	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132871848009	10/17/2013 22:16	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132871848009	10/17/2013 06:26	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132871848009	10/17/2013 06:26	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132875713004	10/16/2013 08:55	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132871848009	10/15/2013 07:08	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132875713004	10/15/2013 15:20	Nelli S Markaryan	1

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

Sample Description: WS-007(0.5-1.0)101213 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7235550
LL Group # 1426121
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/12/2013 13:20 by HVA

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

Submitted: 10/14/2013 11:05

Reported: 10/18/2013 10:57

2F070 SDG#: PEM14-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0236	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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
07035	Arsenic	SW-846 6010B	1	132871848009	10/17/2013 06:37	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132871848009	10/17/2013 06:37	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132871848009	10/17/2013 06:37	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132871848009	10/17/2013 06:37	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132871848009	10/17/2013 22:28	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132871848009	10/17/2013 06:37	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132871848009	10/17/2013 22:28	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132871848009	10/17/2013 06:37	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132871848009	10/17/2013 06:37	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132875713004	10/16/2013 09:07	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132871848009	10/15/2013 07:08	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132875713004	10/15/2013 15:20	Nelli S Markaryan	1

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

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

Sample Description: WS-001(0.5-1.0)101213 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7235551
LL Group # 1426121
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/12/2013 13:30 by HVA

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

Submitted: 10/14/2013 11:05

Reported: 10/18/2013 10:57

2F010 SDG#: PEM14-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0175	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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
07035	Arsenic	SW-846 6010B	1	132871848009	10/17/2013 06:41	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132871848009	10/17/2013 06:41	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132871848009	10/17/2013 06:41	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132871848009	10/17/2013 06:41	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132871848009	10/17/2013 22:32	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132871848009	10/17/2013 06:41	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132871848009	10/17/2013 22:32	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132871848009	10/17/2013 06:41	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132871848009	10/17/2013 06:41	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132875713004	10/16/2013 09:09	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132871848009	10/15/2013 07:08	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132875713004	10/15/2013 15:20	Nelli S Markaryan	1

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

Sample Description: **WS-EB-89-101213 Filt Grab Water**
Mayflower, AR
Pipeline Incident

LL Sample # **WW 7235552**
 LL Group # **1426121**
 Account # **14739**

Project Name: **Mayflower, AR Pipeline Incident**

Collected: 10/12/2013 14:00 by HVA

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

Submitted: 10/14/2013 11:05

Reported: 10/18/2013 10:57

2FE89 SDG#: PEM14-16EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
	SW-846 6010B		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.00039 J	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
	SW-846 7470A		mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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
07035	Arsenic	SW-846 6010B	1	132871848009	10/17/2013 06:45	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132871848009	10/17/2013 06:45	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132871848009	10/17/2013 06:45	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132871848009	10/17/2013 06:45	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132871848009	10/17/2013 22:36	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132871848009	10/17/2013 06:45	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132871848009	10/17/2013 22:36	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132871848009	10/17/2013 06:45	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132871848009	10/17/2013 06:45	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132875713004	10/16/2013 09:11	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132871848009	10/15/2013 07:08	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132875713004	10/15/2013 15:20	Nelli S Markaryan	1

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

Sample Description: DUP-WS-101-101213 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7235553
LL Group # 1426121
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/12/2013 by HVA

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

Submitted: 10/14/2013 11:05

Reported: 10/18/2013 10:57

FD101 SDG#: PEM14-17FD*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
		SW-846 6010B	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0199	0.00033	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.00076	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0047	0.0150	1
07061	Nickel	7440-02-0	N.D.	0.0015	0.0100	1
07036	Selenium	7782-49-2	N.D.	0.0084	0.0200	1
07066	Silver	7440-22-4	N.D.	0.0021	0.0050	1
07071	Vanadium	7440-62-2	N.D.	0.0020	0.0050	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1

General Sample Comments

This sample was filtered in the lab for dissolved metals.

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
07035	Arsenic	SW-846 6010B	1	132871848009	10/17/2013 06:49	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132871848009	10/17/2013 06:49	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132871848009	10/17/2013 06:49	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132871848009	10/17/2013 06:49	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132871848009	10/17/2013 22:40	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132871848009	10/17/2013 06:49	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132871848009	10/17/2013 22:40	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	132871848009	10/17/2013 06:49	Eric L Eby	1
07071	Vanadium	SW-846 6010B	1	132871848009	10/17/2013 06:49	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132875713004	10/16/2013 09:13	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132871848009	10/15/2013 07:08	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132875713004	10/15/2013 15:20	Nelli S Markaryan	1

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

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 10/18/13 at 10:57 AM

Group Number: 1426121

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: 132871848009	Sample number(s): 7235537-7235553								
Arsenic	N.D.	0.0068	0.0200	mg/l	97		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	99		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	98		90-112		
Chromium	N.D.	0.0016	0.0150	mg/l	98		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	109		88-110		
Nickel	N.D.	0.0015	0.0100	mg/l	100		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	104		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	107		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	98		90-110		
Batch number: 132875713004	Sample number(s): 7235537-7235553								
Mercury	N.D.	0.00006	0.00020	mg/l	100		80-120		
		0							

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>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 132871848009	Sample number(s): 7235537-7235553 UNSPK: 7235543 BKG: 7235543								
Arsenic	100	100	81-123	1	20	N.D.	N.D.	0 (1)	20
Barium	100	99	78-118	1	20	0.0201	0.0199	1 (1)	20
Cadmium	98	98	83-116	0	20	N.D.	N.D.	0 (1)	20
Chromium	97	97	76-120	0	20	N.D.	N.D.	0 (1)	20
Lead	109	107	75-125	1	20	N.D.	N.D.	0 (1)	20
Nickel	100	100	86-115	0	20	N.D.	N.D.	0 (1)	20
Selenium	102	106	75-125	3	20	N.D.	N.D.	0 (1)	20
Silver	106	106	75-125	1	20	N.D.	N.D.	0 (1)	20
Vanadium	98	98	90-117	0	20	N.D.	N.D.	0 (1)	20
Batch number: 132875713004	Sample number(s): 7235537-7235553 UNSPK: 7235549 BKG: 7235549								
Mercury	95	100	80-120	5	20	N.D.	N.D.	0 (1)	20

*- 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

For Eurofins Lancaster Laboratories Environmental use only

Group # 420121

Sample # 7235537-53

Instructions on reverse side correspond with circled numbers.

1 of 3

1 Client Information				4 Matrix			5 Analyses Requested						6 Remarks			
Facility #/SID <u>Mayflower Pipeline Incident</u>				Sediment <input type="checkbox"/>	Ground <input type="checkbox"/>	Surface <input checked="" type="checkbox"/>	Preservation Code						SCR#: _____ Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other			
Site Address <u>Mayflower, AR</u>							Potable <input type="checkbox"/>	NPDES <input type="checkbox"/>	Air <input type="checkbox"/>	Total # of Containers						
ExxonMobil PM <u>Scott Bushroe</u>		Cost Center/AFE		Soil <input type="checkbox"/>	Water <input type="checkbox"/>	Oil <input type="checkbox"/>				VOCs	8260B	PAH	8270 SIM	RCRA Metals + hardness Ni, V, Cr, Mg	Diss Metals	HEM Oil & Grease
Consultant/Office <u>ARCADIS</u>																
Consultant PM <u>Steve Barrick</u>		Consultant Phone # <u>919-302-6799</u>														
Sampler <u>Hans Van Aller / Ryan Lewis</u>																
2 Sample Identification		3 Collected		Grab	Composite											
Date	Time															
WS-014 (1.5-2.0)	10/12/13	10-12-2013	1020	X			X	X	X	X	X	X	X			
WS-014 (5.5-6.0)	10/12/13	10-12-2013	1030	X			X	X	X	X	X	X	X			
WS-012 (1.5-2.0)	10/12/13	10-12-2013	1040	X			X	X	X	X	X	X	X			
WS-012 (5.0-5.5)	10/12/13	10-12-2013	1050	X			X	X	X	X	X	X	X			
WS-010 (1.5-2.0)	10/12/13	10-12-2013	1100	X			X	X	X	X	X	X	X			
WS-010 (3.5-4.0)	10/12/13	10-12-2013	1110	X			X	X	X	X	X	X	X			
WS-006 (0.5-1.0)	10/12/13	10-12-2013	1130	X			X	X	X	X	X	X	X			
WS-005 (surface)	10/12/13	10-12-2013	1200	X			X	X	X	X	X	X	X			
WS-002 (surface)	10/12/13	10-12-2013	1210	X			X	X	X	X	X	X	X			
WS-011 (1.5-2.0)	10/12/13	10-12-2013	1220	X			X	X	X	X	X	X	X			
WS-011 (5.0-5.5)	10/12/13	10-12-2013	1230	X			X	X	X	X	X	X	X			
WS-018 (surface)	10/12/13	10-12-2013	1250	X			X	X	X	X	X	X	X			

7 Turnaround Time Requested (TAT) (please circle) Standard <u>5 day</u> 4 day 72 hour 48 hour 24 hour		Relinquished by <u>[Signature]</u> Date <u>10-13-13</u> Time <u>1600</u>		Received by _____ Date _____ Time _____	
		Relinquished by _____ Date _____ Time _____		Received by _____ Date _____ Time _____	
		Relinquished by _____ Date _____ Time _____		Received by _____ Date _____ Time _____	
8 Data Package (circle if required) Type I - Full Type VI (Raw Data) NJ Reduced Other _____		EDD (circle if required) Locus EIM (default) Other _____		Relinquished by Commercial Carrier UPS _____ FedEx _____ Other <u>Southwest</u>	
		Relinquished by _____ Date _____ Time _____		Received by <u>[Signature]</u> Date <u>10-14-13</u> Time <u>1105</u>	
Temperature Upon Receipt <u>0.9-2.8 °C</u>				Custody Seals Intact? <u>Yes</u> No	

ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

Acct. # 14739 For Eurofins Lancaster Laboratories Environmental use only
 Group # 1420121 Sample # 7235537-53
 Instructions on reverse side correspond with circled numbers.

2 of 3

1 Client Information				4 Matrix			5 Analyses Requested										6 Remarks				
Facility #/SID <u>Mayflower Pipeline Incident</u>				Sediment <input type="checkbox"/>	Ground <input type="checkbox"/>	Surface <input checked="" type="checkbox"/>	Preservation Code										Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other				
Site Address <u>Mayflower, AR</u>							Potable <input type="checkbox"/>	NPDES <input type="checkbox"/>	Air <input type="checkbox"/>												
ExxonMobil PM <u>Satt Bushroe</u>		Cost Center/AFE		Soil <input type="checkbox"/>	Water <input type="checkbox"/>	Oil <input type="checkbox"/>				Total # of Containers											6 Lab to filter + pressure diss metals upon receipt
Consultant/Office <u>ARCADIS</u>		Consultant Phone # <u>919-302-6799</u>																			
Consultant PM <u>Steve Barnick</u>		Sampler <u>Hans Van Allen / Ryan Lewis</u>																			
2 Sample Identification			3																		
			Collected																		
			Date	Time																	
			Grab	Composite																	
WS-003 (Surface) 10/2/13			10-12-13	1300	X			9	X	X	X	X	X								
WS-007 (0.5-1.0) 10/2/13			10-12-13	1320	X			9	X	X	X	X	X								
WS-001 (0.5-1.0) 10/2/13			10-12-13	1330	X			9	X	X	X	X	X								
WS-EB-89-10/2/13			10-12-13	1400	X			7	X	X	X	X	X								
DWP-WS-101-10/2/13			10-12-13		X			9	X	X	X	X	X								
WS-014 (1.5-2.0) 10/3/13			10-13-13	0810	X			9	X	X	X	X	X								
WS-014 (5.5-6.0) 10/3/13			10-13-13	0820	X			9	X	X	X	X	X								
WS-012 (1.5-2.0) 10/3/13			10-13-13	0830	X			9	X	X	X	X	X								
WS-012 (5.0-5.5) 10/3/13			10-13-13	0840	X			9	X	X	X	X	X								
WS-010 (1.5-2.0) 10/3/13			10-13-13	0850	X			9	X	X	X	X	X								
WS-010 (3.5-4.0) 10/3/13			10-13-13	0900	X			9	X	X	X	X	X								
WS-006 (0.5-1.0) 10/3/13			10-13-13	0910	X			9	X	X	X	X	X								

7 Turnaround Time Requested (TAT) (please circle) Standard <u>5 day</u> 4 day 72 hour 48 hour 24 hour		Relinquished by <u>[Signature]</u>	Date <u>10-13-13</u>	Time <u>1600</u>	Received by	Date	Time
		Relinquished by	Date	Time	Received by	Date	Time
8 Data Package (circle if required) Type I - Full Type VI (Raw Data) NJ Reduced Other _____		Relinquished by Commercial Carrier		Received by		Date	Time
		UPS _____ FedEx _____ Other <u>Southwest</u>	Temperature Upon Receipt <u>0.9-2.8°C</u>		Custody Seals Intact? <u>Yes</u>		Date
				<u>[Signature]</u>		<u>10-14-13</u>	<u>1105</u>

Environmental Sample Administration 1426121
 Receipt Documentation Log

Client/Project: Exxon Mobil

Shipping Container Sealed: YES NO

Date of Receipt: 10-14-13

Custody Seal Present * : YES NO

Time of Receipt: 1105

* Custody seal was intact unless otherwise noted in the discrepancy section

Source Code: 01

Package: 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
1	DT121	1.1°	TB	WI	Y	B	
2	↓	2.2°	↓	↓	↓	↓	
3	↓	2.8°	↓	↓	↓	↓	
4	↓	1.7°	↓	↓	↓	↓	
5	↓	1.2°	↓	↓	↓	↓	
6	↓	1.1°	↓	↓	↓	↓	

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

received (1) amber for WS-010(1.5-2.0) 101213
1 (1) amber for WS-010(3.5-4.0) 101213 broken

Unpacker Signature/Emp#:

Kimberly 2123

Date/Time: 10-14-13 1200

Environmental Sample Administration
Receipt Documentation Log

1430121

Client/Project: Exxon Mobil

Shipping Container Sealed: YES NO

Date of Receipt: 10-14-13

Custody Seal Present *: YES NO

Time of Receipt: 1105

* Custody seal was intact unless otherwise noted in the discrepancy section

Source Code: 01

Package: 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
7	DT121	1.9°	TB	WI	Y	B	
8	↓	0.9°	↓	↓	↓	↓	
9		2.2°					
10		1.5°					
11		1.4°					
12							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#:

Kristin [Signature] 2123

Date/Time: 10-14-13 1200

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 - The number following the sign is the limit of quantitation, 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 \geq 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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