

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

November 03, 2013

Project: Mayflower, AR Pipeline Incident

Submittal Date: 10/28/2013

Group Number: 1429510

SDG: PEM48

PO Number: B0086003.1301

State of Sample Origin: AR

Client Sample DescriptionLancaster Labs (LL) #

WS-018(Surface)102613 Filt Grab Surface Water	7254081
WS-003(Surface)102613 Filt Grab Surface Water	7254082
WS-007(0.5-1.0)102613 Filt Grab Surface Water	7254083
WS-001(0.5-1.0)102613 Filt Grab Surface Water	7254084
WS-005(Surface)102613 Filt Grab Surface Water	7254085
WS-014(1.5-2.0)102613 Filt Grab Surface Water	7254086
WS-014(5.5-6.0)102613 Filt Grab Surface Water	7254087
WS-012(1.5-2.0)102613 Filt Grab Surface Water	7254088
WS-012(5.0-5.5)102613 Filt Grab Surface Water	7254089
WS-010(1.5-2.0)102613 Filt Grab Surface Water	7254090
WS-010(3.5-4.0)102613 Filt Grab Surface Water	7254091
WS-006(0.5-1.0)102613 Filt Grab Surface Water	7254092
WS-011(1.5-2.0)102613 Filt Grab Surface Water	7254093
WS-011(5.0-5.5)102613 Filt Grab Surface Water	7254094
WS-002(Surface)102613 Filt Grab Surface Water	7254095
DUP-WS-108-102613 Filt Grab Surface Water	7254096
WS-EB-103-102613 Filt Grab Water	7254097

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
COPY TO

ARCADIS

ExxonMobil

ExxonMobil

Attn: Rhiannon Parmalee

Attn: Michael L Sixsmith

Attn: Julie Foster

Respectfully Submitted,



Katherine A. Klinefelter
Principal Specialist

(717) 556-7256

Project Name: Mayflower, AR Pipeline Incident
LLI Group #: 1429510

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-018(Surface)102613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7254081
LL Group # 1429510
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/26/2013 08:40 by CP

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

Submitted: 10/28/2013 13:45

Reported: 11/03/2013 08:19

2618F SDG#: PEM48-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
07035	Arsenic	SW-846 6010B 7440-38-2	mg/l N.D.	mg/l 0.0068	mg/l 0.0200	1
07046	Barium	7440-39-3	0.0197	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						
00259	Mercury	7439-97-6	mg/l N.D.	mg/l 0.000060	mg/l 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	133021848004	11/02/2013 18:36	John P Hook	1
07046	Barium	SW-846 6010B	1	133021848004	11/02/2013 18:36	John P Hook	1
07049	Cadmium	SW-846 6010B	1	133021848004	11/02/2013 18:36	John P Hook	1
07051	Chromium	SW-846 6010B	1	133021848004	11/02/2013 18:36	John P Hook	1
07055	Lead	SW-846 6010B	1	133021848004	11/02/2013 18:36	John P Hook	1
07061	Nickel	SW-846 6010B	1	133021848004	11/02/2013 18:36	John P Hook	1
07036	Selenium	SW-846 6010B	1	133021848004	11/02/2013 18:36	John P Hook	1
07066	Silver	SW-846 6010B	1	133021848004	11/02/2013 18:36	John P Hook	1
07071	Vanadium	SW-846 6010B	1	133021848004	11/02/2013 18:36	John P Hook	1
00259	Mercury	SW-846 7470A	1	133025713004	10/31/2013 06:55	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133021848004	10/30/2013 07:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133025713004	10/30/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-003(Surface)102613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7254082
LL Group # 1429510
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/26/2013 08:50 by CP

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

Submitted: 10/28/2013 13:45

Reported: 11/03/2013 08:19

2603F SDG#: PEM48-02

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	0.0172	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	133021848004	11/02/2013 18:57	John P Hook	1
07046	Barium	SW-846 6010B	1	133021848004	11/02/2013 18:57	John P Hook	1
07049	Cadmium	SW-846 6010B	1	133021848004	11/02/2013 18:57	John P Hook	1
07051	Chromium	SW-846 6010B	1	133021848004	11/02/2013 18:57	John P Hook	1
07055	Lead	SW-846 6010B	1	133021848004	11/02/2013 18:57	John P Hook	1
07061	Nickel	SW-846 6010B	1	133021848004	11/02/2013 18:57	John P Hook	1
07036	Selenium	SW-846 6010B	1	133021848004	11/02/2013 18:57	John P Hook	1
07066	Silver	SW-846 6010B	1	133021848004	11/02/2013 18:57	John P Hook	1
07071	Vanadium	SW-846 6010B	1	133021848004	11/02/2013 18:57	John P Hook	1
00259	Mercury	SW-846 7470A	1	133025713004	10/31/2013 06:57	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133021848004	10/30/2013 07:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133025713004	10/30/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-007(0.5-1.0)102613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7254083
LL Group # 1429510
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/26/2013 09:20 by CP

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

Submitted: 10/28/2013 13:45

Reported: 11/03/2013 08:19

2607F SDG#: PEM48-03

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	0.0231	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	133021848004	11/02/2013 19:00	John P Hook	1
07046	Barium	SW-846 6010B	1	133021848004	11/02/2013 19:00	John P Hook	1
07049	Cadmium	SW-846 6010B	1	133021848004	11/02/2013 19:00	John P Hook	1
07051	Chromium	SW-846 6010B	1	133021848004	11/02/2013 19:00	John P Hook	1
07055	Lead	SW-846 6010B	1	133021848004	11/02/2013 19:00	John P Hook	1
07061	Nickel	SW-846 6010B	1	133021848004	11/02/2013 19:00	John P Hook	1
07036	Selenium	SW-846 6010B	1	133021848004	11/02/2013 19:00	John P Hook	1
07066	Silver	SW-846 6010B	1	133021848004	11/02/2013 19:00	John P Hook	1
07071	Vanadium	SW-846 6010B	1	133021848004	11/02/2013 19:00	John P Hook	1
00259	Mercury	SW-846 7470A	1	133025713004	10/31/2013 06:59	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133021848004	10/30/2013 07:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133025713004	10/30/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-001(0.5-1.0)102613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7254084
LL Group # 1429510
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/26/2013 09:30 by CP

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

Submitted: 10/28/2013 13:45

Reported: 11/03/2013 08:19

2601F SDG#: PEM48-04

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	0.0163	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	133021848004	11/02/2013 19:11	John P Hook	1
07046	Barium	SW-846 6010B	1	133021848004	11/02/2013 19:11	John P Hook	1
07049	Cadmium	SW-846 6010B	1	133021848004	11/02/2013 19:11	John P Hook	1
07051	Chromium	SW-846 6010B	1	133021848004	11/02/2013 19:11	John P Hook	1
07055	Lead	SW-846 6010B	1	133021848004	11/02/2013 19:11	John P Hook	1
07061	Nickel	SW-846 6010B	1	133021848004	11/02/2013 19:11	John P Hook	1
07036	Selenium	SW-846 6010B	1	133021848004	11/02/2013 19:11	John P Hook	1
07066	Silver	SW-846 6010B	1	133021848004	11/02/2013 19:11	John P Hook	1
07071	Vanadium	SW-846 6010B	1	133021848004	11/02/2013 19:11	John P Hook	1
00259	Mercury	SW-846 7470A	1	133025713004	10/31/2013 07:01	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133021848004	10/30/2013 07:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133025713004	10/30/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-005(Surface)102613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7254085
LL Group # 1429510
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/26/2013 09:50 by CP

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

Submitted: 10/28/2013 13:45

Reported: 11/03/2013 08:19

2605F SDG#: PEM48-05

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	0.0120	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	133021848004	11/02/2013 19:14	John P Hook	1
07046	Barium	SW-846 6010B	1	133021848004	11/02/2013 19:14	John P Hook	1
07049	Cadmium	SW-846 6010B	1	133021848004	11/02/2013 19:14	John P Hook	1
07051	Chromium	SW-846 6010B	1	133021848004	11/02/2013 19:14	John P Hook	1
07055	Lead	SW-846 6010B	1	133021848004	11/02/2013 19:14	John P Hook	1
07061	Nickel	SW-846 6010B	1	133021848004	11/02/2013 19:14	John P Hook	1
07036	Selenium	SW-846 6010B	1	133021848004	11/02/2013 19:14	John P Hook	1
07066	Silver	SW-846 6010B	1	133021848004	11/02/2013 19:14	John P Hook	1
07071	Vanadium	SW-846 6010B	1	133021848004	11/02/2013 19:14	John P Hook	1
00259	Mercury	SW-846 7470A	1	133025713004	10/31/2013 07:03	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133021848004	10/30/2013 07:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133025713004	10/30/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-014(1.5-2.0)102613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7254086
LL Group # 1429510
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/26/2013 10:20 by CP

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

Submitted: 10/28/2013 13:45

Reported: 11/03/2013 08:19

2614F SDG#: PEM48-06

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	0.0150	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	133021848004	11/02/2013 19:18	John P Hook	1
07046	Barium	SW-846 6010B	1	133021848004	11/02/2013 19:18	John P Hook	1
07049	Cadmium	SW-846 6010B	1	133021848004	11/02/2013 19:18	John P Hook	1
07051	Chromium	SW-846 6010B	1	133021848004	11/02/2013 19:18	John P Hook	1
07055	Lead	SW-846 6010B	1	133021848004	11/02/2013 19:18	John P Hook	1
07061	Nickel	SW-846 6010B	1	133021848004	11/02/2013 19:18	John P Hook	1
07036	Selenium	SW-846 6010B	1	133021848004	11/02/2013 19:18	John P Hook	1
07066	Silver	SW-846 6010B	1	133021848004	11/02/2013 19:18	John P Hook	1
07071	Vanadium	SW-846 6010B	1	133021848004	11/02/2013 19:18	John P Hook	1
00259	Mercury	SW-846 7470A	1	133025713004	10/31/2013 07:05	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133021848004	10/30/2013 07:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133025713004	10/30/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-014(5.5-6.0)102613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7254087
LL Group # 1429510
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/26/2013 10:30 by CP

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

Submitted: 10/28/2013 13:45

Reported: 11/03/2013 08:19

14F26 SDG#: PEM48-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0147	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 6010B						
SW-846 7470A						
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	133021848004	11/02/2013 19:21	John P Hook	1
07046	Barium	SW-846 6010B	1	133021848004	11/02/2013 19:21	John P Hook	1
07049	Cadmium	SW-846 6010B	1	133021848004	11/02/2013 19:21	John P Hook	1
07051	Chromium	SW-846 6010B	1	133021848004	11/02/2013 19:21	John P Hook	1
07055	Lead	SW-846 6010B	1	133021848004	11/02/2013 19:21	John P Hook	1
07061	Nickel	SW-846 6010B	1	133021848004	11/02/2013 19:21	John P Hook	1
07036	Selenium	SW-846 6010B	1	133021848004	11/02/2013 19:21	John P Hook	1
07066	Silver	SW-846 6010B	1	133021848004	11/02/2013 19:21	John P Hook	1
07071	Vanadium	SW-846 6010B	1	133021848004	11/02/2013 19:21	John P Hook	1
00259	Mercury	SW-846 7470A	1	133025713004	10/31/2013 07:07	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133021848004	10/30/2013 07:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133025713004	10/30/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-012(1.5-2.0)102613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7254088
LL Group # 1429510
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/26/2013 10:40 by CP

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

Submitted: 10/28/2013 13:45

Reported: 11/03/2013 08:19

2612F SDG#: PEM48-08

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	0.0155	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	133021848004	11/02/2013 19:25	John P Hook	1
07046	Barium	SW-846 6010B	1	133021848004	11/02/2013 19:25	John P Hook	1
07049	Cadmium	SW-846 6010B	1	133021848004	11/02/2013 19:25	John P Hook	1
07051	Chromium	SW-846 6010B	1	133021848004	11/02/2013 19:25	John P Hook	1
07055	Lead	SW-846 6010B	1	133021848004	11/02/2013 19:25	John P Hook	1
07061	Nickel	SW-846 6010B	1	133021848004	11/02/2013 19:25	John P Hook	1
07036	Selenium	SW-846 6010B	1	133021848004	11/02/2013 19:25	John P Hook	1
07066	Silver	SW-846 6010B	1	133021848004	11/02/2013 19:25	John P Hook	1
07071	Vanadium	SW-846 6010B	1	133021848004	11/02/2013 19:25	John P Hook	1
00259	Mercury	SW-846 7470A	1	133025713004	10/31/2013 07:09	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133021848004	10/30/2013 07:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133025713004	10/30/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-012(5.0-5.5)102613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7254089
LL Group # 1429510
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/26/2013 10:50 by CP

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

Submitted: 10/28/2013 13:45

Reported: 11/03/2013 08:19

12F26 SDG#: PEM48-09

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	0.0153	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	133021848004	11/02/2013 19:29	John P Hook	1
07046	Barium	SW-846 6010B	1	133021848004	11/02/2013 19:29	John P Hook	1
07049	Cadmium	SW-846 6010B	1	133021848004	11/02/2013 19:29	John P Hook	1
07051	Chromium	SW-846 6010B	1	133021848004	11/02/2013 19:29	John P Hook	1
07055	Lead	SW-846 6010B	1	133021848004	11/02/2013 19:29	John P Hook	1
07061	Nickel	SW-846 6010B	1	133021848004	11/02/2013 19:29	John P Hook	1
07036	Selenium	SW-846 6010B	1	133021848004	11/02/2013 19:29	John P Hook	1
07066	Silver	SW-846 6010B	1	133021848004	11/02/2013 19:29	John P Hook	1
07071	Vanadium	SW-846 6010B	1	133021848004	11/02/2013 19:29	John P Hook	1
00259	Mercury	SW-846 7470A	1	133025713004	10/31/2013 07:15	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133021848004	10/30/2013 07:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133025713004	10/30/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-010(1.5-2.0)102613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7254090
LL Group # 1429510
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/26/2013 11:10 by CP

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

Submitted: 10/28/2013 13:45

Reported: 11/03/2013 08:19

2610F SDG#: PEM48-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0164	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 6010B						
SW-846 7470A						
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	133021848004	11/02/2013 19:32	John P Hook	1
07046	Barium	SW-846 6010B	1	133021848004	11/02/2013 19:32	John P Hook	1
07049	Cadmium	SW-846 6010B	1	133021848004	11/02/2013 19:32	John P Hook	1
07051	Chromium	SW-846 6010B	1	133021848004	11/02/2013 19:32	John P Hook	1
07055	Lead	SW-846 6010B	1	133021848004	11/02/2013 19:32	John P Hook	1
07061	Nickel	SW-846 6010B	1	133021848004	11/02/2013 19:32	John P Hook	1
07036	Selenium	SW-846 6010B	1	133021848004	11/02/2013 19:32	John P Hook	1
07066	Silver	SW-846 6010B	1	133021848004	11/02/2013 19:32	John P Hook	1
07071	Vanadium	SW-846 6010B	1	133021848004	11/02/2013 19:32	John P Hook	1
00259	Mercury	SW-846 7470A	1	133025713004	10/31/2013 07:17	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133021848004	10/30/2013 07:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133025713004	10/30/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-010(3.5-4.0)102613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7254091
LL Group # 1429510
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/26/2013 11:20 by CP

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

Submitted: 10/28/2013 13:45

Reported: 11/03/2013 08:19

10F26 SDG#: PEM48-11

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	0.0169	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	133021848004	11/02/2013 19:36	John P Hook	1
07046	Barium	SW-846 6010B	1	133021848004	11/02/2013 19:36	John P Hook	1
07049	Cadmium	SW-846 6010B	1	133021848004	11/02/2013 19:36	John P Hook	1
07051	Chromium	SW-846 6010B	1	133021848004	11/02/2013 19:36	John P Hook	1
07055	Lead	SW-846 6010B	1	133021848004	11/02/2013 19:36	John P Hook	1
07061	Nickel	SW-846 6010B	1	133021848004	11/02/2013 19:36	John P Hook	1
07036	Selenium	SW-846 6010B	1	133021848004	11/02/2013 19:36	John P Hook	1
07066	Silver	SW-846 6010B	1	133021848004	11/02/2013 19:36	John P Hook	1
07071	Vanadium	SW-846 6010B	1	133021848004	11/02/2013 19:36	John P Hook	1
00259	Mercury	SW-846 7470A	1	133025713004	10/31/2013 07:19	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133021848004	10/30/2013 07:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133025713004	10/30/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-006(0.5-1.0)102613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7254092
LL Group # 1429510
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/26/2013 11:30 by CP

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

Submitted: 10/28/2013 13:45

Reported: 11/03/2013 08:19

2606F SDG#: PEM48-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals Dissolved						
07035	Arsenic	7440-38-2	N.D.	0.0068	0.0200	1
07046	Barium	7440-39-3	0.0158	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 6010B						
00259	Mercury	7439-97-6	N.D.	0.000060	0.00020	1
SW-846 7470A						

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	133021848004	11/02/2013 19:39	John P Hook	1
07046	Barium	SW-846 6010B	1	133021848004	11/02/2013 19:39	John P Hook	1
07049	Cadmium	SW-846 6010B	1	133021848004	11/02/2013 19:39	John P Hook	1
07051	Chromium	SW-846 6010B	1	133021848004	11/02/2013 19:39	John P Hook	1
07055	Lead	SW-846 6010B	1	133021848004	11/02/2013 19:39	John P Hook	1
07061	Nickel	SW-846 6010B	1	133021848004	11/02/2013 19:39	John P Hook	1
07036	Selenium	SW-846 6010B	1	133021848004	11/02/2013 19:39	John P Hook	1
07066	Silver	SW-846 6010B	1	133021848004	11/02/2013 19:39	John P Hook	1
07071	Vanadium	SW-846 6010B	1	133021848004	11/02/2013 19:39	John P Hook	1
00259	Mercury	SW-846 7470A	1	133025713004	10/31/2013 07:27	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133021848004	10/30/2013 07:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133025713004	10/30/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-011(1.5-2.0)102613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7254093
LL Group # 1429510
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/26/2013 12:20 by CP

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

Submitted: 10/28/2013 13:45

Reported: 11/03/2013 08:19

2611F SDG#: PEM48-13

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	0.0173	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	133021848004	11/02/2013 19:43	John P Hook	1
07046	Barium	SW-846 6010B	1	133021848004	11/02/2013 19:43	John P Hook	1
07049	Cadmium	SW-846 6010B	1	133021848004	11/02/2013 19:43	John P Hook	1
07051	Chromium	SW-846 6010B	1	133021848004	11/02/2013 19:43	John P Hook	1
07055	Lead	SW-846 6010B	1	133021848004	11/02/2013 19:43	John P Hook	1
07061	Nickel	SW-846 6010B	1	133021848004	11/02/2013 19:43	John P Hook	1
07036	Selenium	SW-846 6010B	1	133021848004	11/02/2013 19:43	John P Hook	1
07066	Silver	SW-846 6010B	1	133021848004	11/02/2013 19:43	John P Hook	1
07071	Vanadium	SW-846 6010B	1	133021848004	11/02/2013 19:43	John P Hook	1
00259	Mercury	SW-846 7470A	1	133025713004	10/31/2013 07:29	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133021848004	10/30/2013 07:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133025713004	10/30/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-011(5.0-5.5)102613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7254094
LL Group # 1429510
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/26/2013 12:30 by CP

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

Submitted: 10/28/2013 13:45

Reported: 11/03/2013 08:19

11F26 SDG#: PEM48-14

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	0.0176	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	133021848004	11/02/2013 19:53	John P Hook	1
07046	Barium	SW-846 6010B	1	133021848004	11/02/2013 19:53	John P Hook	1
07049	Cadmium	SW-846 6010B	1	133021848004	11/02/2013 19:53	John P Hook	1
07051	Chromium	SW-846 6010B	1	133021848004	11/02/2013 19:53	John P Hook	1
07055	Lead	SW-846 6010B	1	133021848004	11/02/2013 19:53	John P Hook	1
07061	Nickel	SW-846 6010B	1	133021848004	11/02/2013 19:53	John P Hook	1
07036	Selenium	SW-846 6010B	1	133021848004	11/02/2013 19:53	John P Hook	1
07066	Silver	SW-846 6010B	1	133021848004	11/02/2013 19:53	John P Hook	1
07071	Vanadium	SW-846 6010B	1	133021848004	11/02/2013 19:53	John P Hook	1
00259	Mercury	SW-846 7470A	1	133025713004	10/31/2013 07:31	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133021848004	10/30/2013 07:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133025713004	10/30/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-002(Surface)102613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7254095
LL Group # 1429510
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/26/2013 12:40 by CP

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

Submitted: 10/28/2013 13:45

Reported: 11/03/2013 08:19

2602F SDG#: PEM48-15

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	0.0155	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	133021848004	11/02/2013 19:57	John P Hook	1
07046	Barium	SW-846 6010B	1	133021848004	11/02/2013 19:57	John P Hook	1
07049	Cadmium	SW-846 6010B	1	133021848004	11/02/2013 19:57	John P Hook	1
07051	Chromium	SW-846 6010B	1	133021848004	11/02/2013 19:57	John P Hook	1
07055	Lead	SW-846 6010B	1	133021848004	11/02/2013 19:57	John P Hook	1
07061	Nickel	SW-846 6010B	1	133021848004	11/02/2013 19:57	John P Hook	1
07036	Selenium	SW-846 6010B	1	133021848004	11/02/2013 19:57	John P Hook	1
07066	Silver	SW-846 6010B	1	133021848004	11/02/2013 19:57	John P Hook	1
07071	Vanadium	SW-846 6010B	1	133021848004	11/02/2013 19:57	John P Hook	1
00259	Mercury	SW-846 7470A	1	133025713004	10/31/2013 07:33	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133021848004	10/30/2013 07:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133025713004	10/30/2013 16:00	Nelli S Markaryan	1

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

Sample Description: DUP-WS-108-102613 Filt Grab Surface Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7254096
LL Group # 1429510
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/26/2013 by CP

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

Submitted: 10/28/2013 13:45

Reported: 11/03/2013 08:19

D108F SDG#: PEM48-16FD

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	0.0164	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	133021848004	11/02/2013 20:00	John P Hook	1
07046	Barium	SW-846 6010B	1	133021848004	11/02/2013 20:00	John P Hook	1
07049	Cadmium	SW-846 6010B	1	133021848004	11/02/2013 20:00	John P Hook	1
07051	Chromium	SW-846 6010B	1	133021848004	11/02/2013 20:00	John P Hook	1
07055	Lead	SW-846 6010B	1	133021848004	11/02/2013 20:00	John P Hook	1
07061	Nickel	SW-846 6010B	1	133021848004	11/02/2013 20:00	John P Hook	1
07036	Selenium	SW-846 6010B	1	133021848004	11/02/2013 20:00	John P Hook	1
07066	Silver	SW-846 6010B	1	133021848004	11/02/2013 20:00	John P Hook	1
07071	Vanadium	SW-846 6010B	1	133021848004	11/02/2013 20:00	John P Hook	1
00259	Mercury	SW-846 7470A	1	133025713004	10/31/2013 07:40	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133021848004	10/30/2013 07:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133025713004	10/30/2013 16:00	Nelli S Markaryan	1

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

Sample Description: WS-EB-103-102613 Filt Grab Water
Mayflower, AR
Pipeline Incident

LL Sample # WW 7254097
LL Group # 1429510
Account # 14739

Project Name: Mayflower, AR Pipeline Incident

Collected: 10/26/2013 13:30 by CP

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

Submitted: 10/28/2013 13:45

Reported: 11/03/2013 08:19

E103F SDG#: PEM48-17EB*

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	0.0012 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	133021848004	11/02/2013 20:04	John P Hook	1
07046	Barium	SW-846 6010B	1	133021848004	11/02/2013 20:04	John P Hook	1
07049	Cadmium	SW-846 6010B	1	133021848004	11/02/2013 20:04	John P Hook	1
07051	Chromium	SW-846 6010B	1	133021848004	11/02/2013 20:04	John P Hook	1
07055	Lead	SW-846 6010B	1	133021848004	11/02/2013 20:04	John P Hook	1
07061	Nickel	SW-846 6010B	1	133021848004	11/02/2013 20:04	John P Hook	1
07036	Selenium	SW-846 6010B	1	133021848004	11/02/2013 20:04	John P Hook	1
07066	Silver	SW-846 6010B	1	133021848004	11/02/2013 20:04	John P Hook	1
07071	Vanadium	SW-846 6010B	1	133021848004	11/02/2013 20:04	John P Hook	1
00259	Mercury	SW-846 7470A	1	133025713004	10/31/2013 07:42	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133021848004	10/30/2013 07:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133025713004	10/30/2013 16:00	Nelli S Markaryan	1

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

Quality Control SummaryClient Name: ExxonMobil c/o Arcadis
Reported: 11/03/13 at 08:19 AM

Group Number: 1429510

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: 133021848004	Sample number(s): 7254081-7254097								
Arsenic	N.D.	0.0068	0.0200	mg/l	102		90-113		
Barium	N.D.	0.00033	0.0050	mg/l	99		90-110		
Cadmium	N.D.	0.00076	0.0050	mg/l	101		90-112		
Chromium	N.D.	0.0016	0.0150	mg/l	99		90-110		
Lead	N.D.	0.0047	0.0150	mg/l	102		88-110		
Nickel	N.D.	0.0015	0.0100	mg/l	105		90-111		
Selenium	N.D.	0.0084	0.0200	mg/l	99		80-120		
Silver	N.D.	0.0021	0.0050	mg/l	108		80-120		
Vanadium	N.D.	0.0020	0.0050	mg/l	99		90-110		
Batch number: 133025713004	Sample number(s): 7254081-7254097								
Mercury	N.D.	0.00006	0.00020	mg/l	104		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: 133021848004	Sample number(s): 7254081-7254097 UNSPK: 7254081 BKG: 7254081								
Arsenic	103	102	81-123	1	20	N.D.	N.D.	0 (1)	20
Barium	99	98	78-118	1	20	0.0197	0.0191	3 (1)	20
Cadmium	100	100	83-116	0	20	N.D.	N.D.	0 (1)	20
Chromium	99	100	76-120	0	20	N.D.	N.D.	0 (1)	20
Lead	102	101	75-125	1	20	N.D.	N.D.	0 (1)	20
Nickel	103	103	86-115	0	20	N.D.	N.D.	0 (1)	20
Selenium	98	99	75-125	1	20	N.D.	N.D.	0 (1)	20
Silver	106	106	75-125	0	20	N.D.	N.D.	0 (1)	20
Vanadium	100	100	90-117	0	20	N.D.	N.D.	0 (1)	20
Batch number: 133025713004	Sample number(s): 7254081-7254097 UNSPK: 7254091 BKG: 7254091								
Mercury	106	105	80-120	1	20	N.D.	N.D.	0 (1)	20

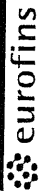
*- Outside of specification

** - 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 # 14739 Sample # 1254081-97
Instructions on reverse side correspond with circled numbers.

Client Information

Facility #/SID Mayflower Pipeline Incident
Site Address Mayflower, AR
ExxonMobil PM Scott Bushner
Consultant/Office ARCADIS
Consultant PM Steve Barick
Consultant Phone # 919-302-6799

Sampler Clement Papatio / Ryan Lewis
Sample Identification
Date Collected Time

Sample Identification	Date	Time	Grab	Composite
WS-018 (Surface) 102613	10-26-13	0840	X	
WS-003 (Surface) 102613	10-26-13	0850	X	
WS-007 (0.5-1.0) 102613	10-26-13	0920	X	
WS-001 (0.5-1.0) 102613	10-26-13	0930	X	
WS-005 (Surface) 102613	10-26-13	0950	X	
WS-014 (1.5-2.0) 102613	10-26-13	1020	X	
WS-014 (5.5-6.0) 102613	10-26-13	1030	X	
WS-012 (1.5-2.0) 102613	10-26-13	1040	X	
WS-012 (5.0-5.5) 102613	10-26-13	1050	X	
WS-010 (1.5-2.0) 102613	10-26-13	1110	X	
WS-010 (3.5-4.0) 102613	10-26-13	1120	X	
WS-006 (0.5-1.0) 102613	10-26-13	1130	X	

7 Turnaround Time Requested (TAT) (please circle)
Standard 5 day
72 hour 48 hour 24 hour
Relinquished by [Signature]
Relinquished by [Signature]
Relinquished by [Signature]

8 Data Package (circle if required)
Type I - Full
Type VI (Raw Data)
NJ Reduced
Other
EDD (circle if required)
Locus EIM (default)
Other

Analyses Requested

Preservation Code	H	N	H
VOCs 8260 B	X	X	X
PAH 8270 SIM	X	X	X
RCRA Metals N/A, Ca, Mg	X	X	X
Diss Metals	X	X	X
HEM Q1 & Q2	X	X	X

Matrix

Matrix	Soil	Water	Oil
Sediment			
Potable			
NPDES			
Surface	X		
Air			

Preservation Codes

H = HCl
N = HNO₃
S = H₂SO₄

Remarks

Lab to filter and preserve diss metals upon receipt

9 Received by [Signature]
Date 10-27-13 Time 1500
Received by [Signature]
Date [] Time []
Received by [Signature]
Date [] Time []
Received by [Signature]
Date 10-28-13 Time 1345

Temperature Upon Receipt 0.3-3.1°C
Custody Seals Intact? Yes No

ExxonMobil Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. #

14739

For Eurofins Lancaster Laboratories Environmental use only
Group # 1439510 Sample # 125481-97

Instructions on reverse side correspond with circled numbers.

1 Client Information			5 Analyses Requested			SCR#:		
Facility #/SID	Mauflower Pipeline Incident		Preservation Code			Preservation Codes		
Site Address	Mauflower, AR					H = HCl N = HNO ₃ S = H ₂ SO ₄ T = Thiosulfate B = NaOH O = Other		
ExxonMobil PM	Scott Bushroe					Remarks		
Consultant/Office	ARCADIS					Lab to filter and preserve diss metals upon receipt		
Consultant PM	Steve Barrack							
Consultant Phone #	919-302-6799							
Sample	Clement Pagano / Ryan Lewis							
2 Sample Identification			3 Grab			Total # of Containers		
Date			Time					
WS-011 (1.5-2.0) 102613			1220			VOCs 8260 B		
WS-011 (5.0-5.5) 102613			1230			PAH 8270 SIM		
WS-002 (surface) 102613			1240			Diss Metals		
WS-003-107-102613			---			+ Hardness / Mg		
WS-EB-103-102613			1330			HBM Oil & Grease		
WS-018 (surface) 102713			0830					
WS-003 (surface) 102713			0840					
WS-007 (0.5-1.0) 102713			0850					
WS-001 (0.5-1.0) 102713			0900					
WS-005 (surface) 102713			0920					
WS-014 (1.5-2.0) 102713			0950					
WS-014 (5.5-6.0) 102713			1000					
7 Turnaround Time Requested (TAT) (please circle)			Relinquished by			Date		
Standard			5 day			10-27-13		
72 hour			4 day			1500		
48 hour			24 hour					
8 Data Package (circle if required)			Relinquished by			Date		
Type I - Full			Relinquished by			Time		
Type VI (Raw Data)			Relinquished by			Time		
NJ Reduced			Relinquished by			Time		
Other			Relinquished by Commercial Carrier			Time		
EDD (circle if required)			UPS			Date		
Locus EIM (default)			FedEx			Date		
Other			Other Southwest			Date		
			Temperature Upon Receipt 0.3-3.1 °C			Date		
			Custody Seals Intact?			Date		
			Yes			Date		
			No			Date		

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

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

7053 0713

Kathy Klinefelter

14739, 1429510, 7254081-97

From: Chandler, Jennifer [Jennifer.Chandler@arcadis-us.com]
Sent: Tuesday, October 29, 2013 11:03 AM
To: Kathy Klinefelter; Mott, Lyndi; Rachel L. Kreamer
Subject: RE: Mayflower sample ID discrepancy noted.

Hi Kathy,

It appears that the COC was incorrect and that the bottle labels were correct. The sample ID should be DUP-WS-108-102613.

Thanks,

Jennifer Chandler | Scientist 2 – Project Chemist | jennifer.chandler@arcadis-us.com
 ARCADIS U.S., Inc. | 630 Plaza Drive, Suite 100 | Highlands Ranch, CO, 80129
 T. 303.471.3549 | F. 720.344.3535

www.arcadis-us.com

Please consider the environment before printing this email.

From: Kathy Klinefelter [mailto:KKlinefelter@lancasterlabs.com]
Sent: Tuesday, October 29, 2013 8:07 AM
To: Mott, Lyndi; Chandler, Jennifer; Rachel L. Kreamer
Subject: Mayflower sample ID discrepancy noted.

Hello,

Please see the attached COC. A sample ID discrepancy was noted. The COC has sample ID listed as DUP-WS-107-102613 Grab Surface Water, but the bottle labels have the ID as DUP-WS-108-102613. Which ID is correct? The lab previously received a sample identified as DUP-WS-107-102413 Grab Surface Water.

Thanks,

Kathy Klinefelter
 Principal Project Manager, Environmental Client Services

Eurofins Lancaster Laboratories
 Environmental, LLC
 2425 New Holland Pike
 Lancaster, PA 17601
 USA
 Phone: +1 717-556-7256
 Fax: +1 717-656-6766

Website: www.LancasterLabsEnv.com

From: Lewis, Ryan [mailto:Ryan.Lewis@arcadis-us.com]
Sent: Sunday, October 27, 2013 7:46 PM
To: Van Aller, Hans; 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; Steve C. Davies
Subject: Mayflower Surface water sampling COCs/ Southwest airbill 102713

Hello All

Included are the COC's and Southwest airbill for today's surface water sampling event. We shipped 12 coolers of surface water samples. They will arrive tonight and be ready for pick up first thing in the morning.

Thanks

10/29/2013

Page 24 of 28

14739, 1429510, 7254081-97

Ryan B Lewis | Geologist 1 | ryan.lewis@arcadis-us.com

ARCADIS U.S., Inc. | 111 SW Columbia Street, Suite 670 | Portland, OR 97201
T: 503 220 8201 ext. 1101 | M: 503 863 9060
www.arcadis-us.com

ARCADIS, Imagine the result
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Environmental Sample Administration
Receipt Documentation Log

1429510

Client/Project: Exxon MobilShipping Container Sealed: YES NODate of Receipt: 10-28-13Custody Seal Present * : YES NOTime of Receipt: 1345* Custody seal was intact unless otherwise noted in the
discrepancy sectionSource Code: 01Package: 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	1.5°	TB	WI	Y	B	
2	↓	3.1°	↓	↓	↓	↓	
3	↓	1.4°	↓	↓	↓	↓	
4	↓	0.6°	↓	↓	↓	↓	
5	↓	0.8°	↓	↓	↓	↓	
6	↓	2.4°	↓	↓	↓	↓	

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

Paperwork Discrepancy/Unpacking Problems:

DUP-WS-107 labeled as DUP-WS-108

Unpacker Signature/Emp#:

Kristin Zgh 2123Date/Time: 10-28-13 1430

Environmental Sample Administration
Receipt Documentation Log

1429510

Client/Project: Exxon MobilShipping Container Sealed: YES NODate of Receipt: 10-28-13Custody Seal Present * : YES NOTime of Receipt: 1345* Custody seal was intact unless otherwise noted in the
discrepancy sectionSource Code: 01Package: 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 7	DT121	2.9°	TB	WI	Y	B	
² 8	↓	0.6°	↓	↓	↓	↓	
³ 9	↓	0.3°	↓	↓	↓	↓	
⁴ 10	↓	0.3°	↓	↓	↓	↓	
⁵ 11	↓	1.7°	↓	↓	↓	↓	
⁶ 12	↓	0.9°	↓	↓	↓	↓	

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

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#:

Kristin Zyl 2120Date/Time: 10-28-13 1430

Issued by Dept. 6042 Management

2174.06

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 <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is $<$ CRDL, but $\geq$ IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	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
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns $>25\%$	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	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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