



AMERICAN
WEST
ANALYTICAL
LABORATORIES

Jim Harris
Utah DEQ DERR
168 N. 1950 W., 1st Floor
Salt Lake City, Ut 84116
TEL: (801) 536-4145

RE: Red Butte Oil Spill

Dear Jim Harris:

Lab Set ID: 1006246

463 West 3600 South
Salt Lake City, UT
84115

American West Analytical Laboratories received 11 sample(s) on 6/14/2010 for the analyses presented in the following report.

All analyses were performed in accordance to The NELAC Institute protocols unless noted otherwise. American West Analytical Laboratories is certified by The NELAC Institute in Utah and Texas; and is state certified in Colorado and Idaho. Certification document is available upon request. If you have any questions or concerns regarding this report please feel free to call.

(801) 263-8686

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email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit.

Thank You,

Jose Rocha
QA Officer

Approved by: _____
Laboratory Director or designee



AMERICAN
WEST
ANALYTICAL
LABORATORIES

INORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR

Contact: Jim Harris

Project: Red Butte Oil Spill

Lab Sample ID: 1006246-001

Client Sample ID: Red Butte Below Gardens

Collection Date: 6/14/2010 1120h

Received Date: 6/14/2010 1950h

TOTAL METALS

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	6/15/2010 1418h	6/15/2010 1808h	E200.8	0.00060	0.0011	
Barium	mg/L	6/15/2010 1418h	6/15/2010 1808h	E200.8	0.00040	0.060	
Cadmium	mg/L	6/15/2010 1418h	6/15/2010 1808h	E200.8	0.00018	< 0.00018	
Chromium	mg/L	6/15/2010 1416h	6/15/2010 1623h	E200.7	0.010	< 0.010	
Lead	mg/L	6/15/2010 1418h	6/15/2010 1808h	E200.8	0.00040	0.0026	
Mercury	mg/L	6/15/2010 1524h	6/16/2010 842h	E245.1	0.00020	< 0.00020	
Selenium	mg/L	6/15/2010 1418h	6/15/2010 1808h	E200.8	0.00080	< 0.00080	
Silver	mg/L	6/15/2010 1418h	6/15/2010 1808h	E200.8	0.00040	< 0.00040	

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Laboratory Director

Jose Rocha

QA Officer



INORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-002
Client Sample ID: Red Butte @ 1100 E.
Collection Date: 6/14/2010 1220h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

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LABORATORIES

TOTAL METALS

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	6/15/2010 1418h	6/15/2010 1838h	E200.8	0.00060	0.0015	
Barium	mg/L	6/15/2010 1418h	6/15/2010 1838h	E200.8	0.00040	0.056	
Cadmium	mg/L	6/15/2010 1418h	6/15/2010 1838h	E200.8	0.00018	< 0.00018	
Chromium	mg/L	6/15/2010 1416h	6/15/2010 1638h	E200.7	0.010	< 0.010	
Lead	mg/L	6/15/2010 1418h	6/15/2010 1838h	E200.8	0.00040	0.0026	
Mercury	mg/L	6/15/2010 1524h	6/16/2010 831h	E245.1	0.00020	< 0.00020	
Selenium	mg/L	6/15/2010 1418h	6/15/2010 1838h	E200.8	0.00080	< 0.00080	
Silver	mg/L	6/15/2010 1418h	6/15/2010 1838h	E200.8	0.00040	< 0.00040	

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INORGANIC ANALYTICAL REPORT

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Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-003
Client Sample ID: 1300 S. Storm Drain
Collection Date: 6/14/2010 1300h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

TOTAL METALS

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	6/15/2010 1418h	6/15/2010 1844h	E200.8	0.00060	0.0034	
Barium	mg/L	6/15/2010 1418h	6/15/2010 1844h	E200.8	0.00040	0.075	
Cadmium	mg/L	6/15/2010 1418h	6/15/2010 1844h	E200.8	0.00018	< 0.00018	
Chromium	mg/L	6/15/2010 1416h	6/15/2010 1642h	E200.7	0.010	< 0.010	
Lead	mg/L	6/15/2010 1418h	6/15/2010 1844h	E200.8	0.00040	0.0012	
Mercury	mg/L	6/15/2010 1524h	6/16/2010 843h	E245.1	0.00020	< 0.00020	
Selenium	mg/L	6/15/2010 1418h	6/15/2010 1844h	E200.8	0.00080	< 0.00080	
Silver	mg/L	6/15/2010 1418h	6/15/2010 1844h	E200.8	0.00040	< 0.00040	

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Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-004
Client Sample ID: 900 S. Storm Drain
Collection Date: 6/14/2010 1418h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

TOTAL METALS

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	6/15/2010 1418h	6/15/2010 1850h	E200.8	0.00060	0.0027	
Barium	mg/L	6/15/2010 1418h	6/15/2010 1850h	E200.8	0.00040	0.080	
Cadmium	mg/L	6/15/2010 1418h	6/15/2010 1850h	E200.8	0.00018	< 0.00018	
Chromium	mg/L	6/15/2010 1416h	6/15/2010 1646h	E200.7	0.010	< 0.010	
Lead	mg/L	6/15/2010 1418h	6/15/2010 1850h	E200.8	0.00040	0.0045	
Mercury	mg/L	6/15/2010 1524h	6/16/2010 845h	E245.1	0.00020	< 0.00020	
Selenium	mg/L	6/15/2010 1418h	6/15/2010 1850h	E200.8	0.00080	0.00083	
Silver	mg/L	6/15/2010 1418h	6/15/2010 1850h	E200.8	0.00040	< 0.00040	

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INORGANIC ANALYTICAL REPORT

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Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-005
Client Sample ID: Jordan @ Indiana
Collection Date: 6/14/2010 1500h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

TOTAL METALS

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	6/15/2010 1418h	6/15/2010 1915h	E200.8	0.00060	0.0050	
Barium	mg/L	6/15/2010 1418h	6/15/2010 1915h	E200.8	0.00040	0.064	
Cadmium	mg/L	6/15/2010 1418h	6/15/2010 1915h	E200.8	0.00018	< 0.00018	
Chromium	mg/L	6/15/2010 1416h	6/15/2010 1702h	E200.7	0.010	< 0.010	
Lead	mg/L	6/15/2010 1418h	6/15/2010 1915h	E200.8	0.00040	0.0067	
Mercury	mg/L	6/15/2010 1524h	6/16/2010 847h	E245.1	0.00020	< 0.00020	
Selenium	mg/L	6/15/2010 1418h	6/15/2010 1915h	E200.8	0.00080	< 0.00080	
Silver	mg/L	6/15/2010 1418h	6/15/2010 1915h	E200.8	0.00040	< 0.00040	

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INORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-006
Client Sample ID: New State Canal
Collection Date: 6/14/2010 1610h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

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TOTAL METALS

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	6/15/2010 1418h	6/15/2010 1921h	E200.8	0.00060	0.0057	
Barium	mg/L	6/15/2010 1418h	6/15/2010 1921h	E200.8	0.00040	0.064	
Cadmium	mg/L	6/15/2010 1418h	6/15/2010 1921h	E200.8	0.00018	< 0.00018	
Chromium	mg/L	6/15/2010 1416h	6/15/2010 1706h	E200.7	0.010	< 0.010	
Lead	mg/L	6/15/2010 1418h	6/15/2010 1921h	E200.8	0.00040	0.011	
Mercury	mg/L	6/15/2010 1524h	6/16/2010 849h	E245.1	0.00020	< 0.00020	
Selenium	mg/L	6/15/2010 1418h	6/15/2010 1921h	E200.8	0.00080	< 0.00080	
Silver	mg/L	6/15/2010 1418h	6/15/2010 1921h	E200.8	0.00040	< 0.00040	

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INORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-007
Client Sample ID: Burnham Dam
Collection Date: 6/14/2010 1630h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

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TOTAL METALS

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	6/15/2010 1418h	6/15/2010 1927h	E200.8	0.00060	0.0055	
Barium	mg/L	6/15/2010 1418h	6/15/2010 1927h	E200.8	0.00040	0.059	
Cadmium	mg/L	6/15/2010 1418h	6/15/2010 1927h	E200.8	0.00018	< 0.00018	
Chromium	mg/L	6/15/2010 1416h	6/15/2010 1710h	E200.7	0.010	< 0.010	
Lead	mg/L	6/15/2010 1418h	6/15/2010 1927h	E200.8	0.00040	0.0081	
Mercury	mg/L	6/15/2010 1524h	6/16/2010 851h	E245.1	0.00020	< 0.00020	
Selenium	mg/L	6/15/2010 1418h	6/15/2010 1927h	E200.8	0.00080	< 0.00080	
Silver	mg/L	6/15/2010 1418h	6/15/2010 1927h	E200.8	0.00040	< 0.00040	

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INORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR

Contact: Jim Harris

Project: Red Butte Oil Spill

Lab Sample ID: 1006246-008

Client Sample ID: Jordan R. @ Cudahy Lane

Collection Date: 6/14/2010 1710h

Received Date: 6/14/2010 1950h

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LABORATORIES

TOTAL METALS

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	6/15/2010 1418h	6/15/2010 1933h	E200.8	0.00060	0.0035	
Barium	mg/L	6/15/2010 1418h	6/15/2010 1933h	E200.8	0.00040	0.059	
Cadmium	mg/L	6/15/2010 1418h	6/15/2010 1933h	E200.8	0.00018	< 0.00018	
Chromium	mg/L	6/15/2010 1416h	6/15/2010 1714h	E200.7	0.010	< 0.010	
Lead	mg/L	6/15/2010 1418h	6/15/2010 1933h	E200.8	0.00040	0.0055	
Mercury	mg/L	6/15/2010 1524h	6/16/2010 852h	E245.1	0.00020	< 0.00020	
Selenium	mg/L	6/15/2010 1418h	6/15/2010 1933h	E200.8	0.00080	< 0.00080	
Silver	mg/L	6/15/2010 1418h	6/15/2010 1933h	E200.8	0.00040	< 0.00040	

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INORGANIC ANALYTICAL REPORT

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Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-009
Client Sample ID: Jordan @ 1800 N.
Collection Date: 6/14/2010 1730h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

TOTAL METALS

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	6/15/2010 1418h	6/15/2010 1939h	E200.8	0.00060	0.0038	
Barium	mg/L	6/15/2010 1418h	6/15/2010 1939h	E200.8	0.00040	0.059	
Cadmium	mg/L	6/15/2010 1418h	6/15/2010 1939h	E200.8	0.00018	< 0.00018	
Chromium	mg/L	6/15/2010 1416h	6/15/2010 1718h	E200.7	0.010	< 0.010	
Lead	mg/L	6/15/2010 1418h	6/15/2010 1939h	E200.8	0.00040	0.0038	
Mercury	mg/L	6/15/2010 1524h	6/16/2010 854h	E245.1	0.00020	< 0.00020	
Selenium	mg/L	6/15/2010 1418h	6/15/2010 1939h	E200.8	0.00080	< 0.00080	
Silver	mg/L	6/15/2010 1418h	6/15/2010 1939h	E200.8	0.00040	< 0.00040	

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INORGANIC ANALYTICAL REPORT

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LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-010
Client Sample ID: Jordan @ 300 N.
Collection Date: 6/14/2010 1750h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

TOTAL METALS

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	6/15/2010 1418h	6/15/2010 1944h	E200.8	0.00060	0.0035	
Barium	mg/L	6/15/2010 1418h	6/15/2010 1944h	E200.8	0.00040	0.057	
Cadmium	mg/L	6/15/2010 1418h	6/15/2010 1944h	E200.8	0.00018	< 0.00018	
Chromium	mg/L	6/15/2010 1416h	6/15/2010 1722h	E200.7	0.010	< 0.010	
Lead	mg/L	6/15/2010 1418h	6/15/2010 1944h	E200.8	0.00040	0.0032	
Mercury	mg/L	6/15/2010 1524h	6/16/2010 856h	E245.1	0.00020	< 0.00020	
Selenium	mg/L	6/15/2010 1418h	6/15/2010 1944h	E200.8	0.00080	< 0.00080	
Silver	mg/L	6/15/2010 1418h	6/15/2010 1944h	E200.8	0.00040	< 0.00040	

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Jose Rocha
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INORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-011
Client Sample ID: Jordan @ 1700 S.
Collection Date: 6/14/2010 1820h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

AMERICAN
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LABORATORIES

TOTAL METALS

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	6/15/2010 1418h	6/15/2010 1950h	E200.8	0.00060	0.0070	
Barium	mg/L	6/15/2010 1418h	6/15/2010 1950h	E200.8	0.00040	0.056	
Cadmium	mg/L	6/15/2010 1418h	6/15/2010 1950h	E200.8	0.00018	< 0.00018	
Chromium	mg/L	6/15/2010 1416h	6/15/2010 1726h	E200.7	0.010	< 0.010	
Lead	mg/L	6/15/2010 1418h	6/15/2010 1950h	E200.8	0.00040	0.012	
Mercury	mg/L	6/15/2010 1524h	6/16/2010 902h	E245.1	0.00020	< 0.00020	
Selenium	mg/L	6/15/2010 1418h	6/15/2010 1950h	E200.8	0.00080	0.00083	
Silver	mg/L	6/15/2010 1418h	6/15/2010 1950h	E200.8	0.00040	< 0.00040	

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INORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR

Contact: Jim Harris

Project: Red Butte Oil Spill

Lab Sample ID: 1006246-001

Client Sample ID: Red Butte Below Gardens

Collection Date: 6/14/2010 1120h

Received Date: 6/14/2010 1950h

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Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chemical Oxygen Demand	mg/L		6/15/2010 1030h	HACH 8000	10	12	~

~ - The sample was received unpreserved and was therefore preserved upon receipt.

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INORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-002
Client Sample ID: Red Butte @ 1100 E.
Collection Date: 6/14/2010 1220h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

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Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chemical Oxygen Demand	mg/L		6/15/2010 1030h	HACH 8000	10	34	~

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Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-003
Client Sample ID: 1300 S. Storm Drain
Collection Date: 6/14/2010 1300h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

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Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chemical Oxygen Demand	mg/L		6/15/2010 1030h	HACH 8000	10	13	~

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Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-004
Client Sample ID: 900 S. Storm Drain
Collection Date: 6/14/2010 1418h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

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Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chemical Oxygen Demand	mg/L		6/15/2010 1030h	HACH 8000	10	23	~

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INORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-005
Client Sample ID: Jordan @ Indiana
Collection Date: 6/14/2010 1500h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

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Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chemical Oxygen Demand	mg/L		6/15/2010 1030h	HACH 8000	10	13	~

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INORGANIC ANALYTICAL REPORT

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Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-006
Client Sample ID: New State Canal
Collection Date: 6/14/2010 1610h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

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Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chemical Oxygen Demand	mg/L		6/15/2010 1030h	HACH 8000	10	13	~

~ - The sample was received unpreserved and was therefore preserved upon receipt.

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ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-007
Client Sample ID: Burnham Dam
Collection Date: 6/14/2010 1630h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

463 West 3600 South
Salt Lake City, UT
84115

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chemical Oxygen Demand	mg/L		6/15/2010 1030h	HACH 8000	10	< 10	~

~ - The sample was received unpreserved and was therefore preserved upon receipt.

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email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer



INORGANIC ANALYTICAL REPORT

AMERICAN
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LABORATORIES

463 West 3600 South
Salt Lake City, UT
84115

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-008
Client Sample ID: Jordan R. @ Cudahy Lane
Collection Date: 6/14/2010 1710h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chemical Oxygen Demand	mg/L		6/15/2010 1030h	HACH 8000	10	14	~

~ - The sample was received unpreserved and was therefore preserved upon receipt.

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INORGANIC ANALYTICAL REPORT

AMERICAN
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LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-009
Client Sample ID: Jordan @ 1800 N.
Collection Date: 6/14/2010 1730h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

463 West 3600 South
Salt Lake City, UT
84115

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chemical Oxygen Demand	mg/L		6/15/2010 1030h	HACH 8000	10	< 10	~

~ - The sample was received unpreserved and was therefore preserved upon receipt.

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INORGANIC ANALYTICAL REPORT

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LABORATORIES

463 West 3600 South
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84115

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-010
Client Sample ID: Jordan @ 300 N.
Collection Date: 6/14/2010 1750h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chemical Oxygen Demand	mg/L		6/15/2010 1030h	HACH 8000	10	< 10	~

~ - The sample was received unpreserved and was therefore preserved upon receipt.

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INORGANIC ANALYTICAL REPORT

AMERICAN
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LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-011
Client Sample ID: Jordan @ 1700 S.
Collection Date: 6/14/2010 1820h
Received Date: 6/14/2010 1950h

Contact: Jim Harris

463 West 3600 South
Salt Lake City, UT
84115

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chemical Oxygen Demand	mg/L		6/15/2010 1030h	HACH 8000	10	< 10	~

~ - The sample was received unpreserved and was therefore preserved upon receipt.

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ORGANIC ANALYTICAL REPORT

AMERICAN
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LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-001D
Client Sample ID: Red Butte Below Gardens
Collection Date: 6/14/2010 1120h
Received Date: 6/14/2010 1950h
Method Used: SW8015D

Contact: Jim Harris

Analyzed: 6/16/2010 2227h

Extracted: 6/15/2010 1022h

Analytical Results TPH-DRO (C10-C28) by GC/FID Method 8015D/UT Mod.

Units: mg/L

Dilution Factor: 1

463 West 3600 South
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84115

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics C10-C28	68476-34-6	8.0	< 8.0	
Surr: 4-Bromofluorobenzene	460-00-4	17-106	55.5	

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ORGANIC ANALYTICAL REPORT

AMERICAN
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LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-002D
Client Sample ID: Red Butte @ 1100 E.
Collection Date: 6/14/2010 1220h
Received Date: 6/14/2010 1950h
Method Used: SW8015D

Contact: Jim Harris

Analyzed: 6/16/2010 2248h

Extracted: 6/15/2010 1022h

Analytical Results TPH-DRO (C10-C28) by GC/FID Method 8015D/UT Mod.

Units: mg/L

Dilution Factor: 1

463 West 3600 South
Salt Lake City, UT
84115

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics C10-C28	68476-34-6	8.0	12	
Surr: 4-Bromofluorobenzene	460-00-4	17-106	57.0	

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ORGANIC ANALYTICAL REPORT

AMERICAN
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LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-003D
Client Sample ID: 1300 S. Storm Drain
Collection Date: 6/14/2010 1300h
Received Date: 6/14/2010 1950h
Method Used: SW8015D

Contact: Jim Harris

Analyzed: 6/16/2010 2309h

Extracted: 6/15/2010 1022h

Analytical Results TPH-DRO (C10-C28) by GC/FID Method 8015D/UT Mod.

Units: mg/L

Dilution Factor: 1

463 West 3600 South
Salt Lake City, UT
84115

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics C10-C28	68476-34-6	8.0	22	
Surr: 4-Bromofluorobenzene	460-00-4	17-106	57.2	

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ORGANIC ANALYTICAL REPORT

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LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-004D
Client Sample ID: 900 S. Storm Drain
Collection Date: 6/14/2010 1418h
Received Date: 6/14/2010 1950h
Method Used: SW8015D

Contact: Jim Harris

Analyzed: 6/16/2010 2330h

Extracted: 6/15/2010 1022h

Analytical Results TPH-DRO (C10-C28) by GC/FID Method 8015D/UT Mod.

Units: mg/L

Dilution Factor: 1

463 West 3600 South
Salt Lake City, UT

84115

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics C10-C28	68476-34-6	8.0	< 8.0	
Surr: 4-Bromofluorobenzene	460-00-4	17-106	56.5	

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ORGANIC ANALYTICAL REPORT

AMERICAN
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LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-005D
Client Sample ID: Jordan @ Indiana
Collection Date: 6/14/2010 1500h
Received Date: 6/14/2010 1950h
Method Used: SW8015D

Contact: Jim Harris

Analyzed: 6/16/2010 2351h

Extracted: 6/15/2010 1022h

Analytical Results TPH-DRO (C10-C28) by GC/FID Method 8015D/UT Mod.

Units: mg/L

Dilution Factor: 1

463 West 3600 South
Salt Lake City, UT
84115

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics C10-C28	68476-34-6	8.0	< 8.0	
Surr: 4-Bromofluorobenzene	460-00-4	17-106	49.0	

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ORGANIC ANALYTICAL REPORT

AMERICAN
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LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-006D
Client Sample ID: New State Canal
Collection Date: 6/14/2010 1610h
Received Date: 6/14/2010 1950h
Method Used: SW8015D

Contact: Jim Harris

Analyzed: 6/17/2010 011h
Extracted: 6/15/2010 1022h

Analytical Results TPH-DRO (C10-C28) by GC/FID Method 8015D/UT Mod.

Units: mg/L

Dilution Factor: 1

463 West 3600 South
Salt Lake City, UT
84115

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics C10-C28	68476-34-6	8.0	< 8.0	
Surr: 4-Bromofluorobenzene	460-00-4	17-106	51.0	

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ORGANIC ANALYTICAL REPORT

AMERICAN
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LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-007D
Client Sample ID: Burnham Dam
Collection Date: 6/14/2010 1630h
Received Date: 6/14/2010 1950h
Method Used: SW8015D

Contact: Jim Harris

Analyzed: 6/17/2010 114h

Extracted: 6/15/2010 1022h

Analytical Results

TPH-DRO (C10-C28) by GC/FID Method 8015D/UT Mod.

Units: mg/L

Dilution Factor: 1

463 West 3600 South
Salt Lake City, UT

84115

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics C10-C28	68476-34-6	8.0	< 8.0	
Surr: 4-Bromofluorobenzene	460-00-4	17-106	51.0	

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ORGANIC ANALYTICAL REPORT

AMERICAN
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LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-008D
Client Sample ID: Jordan R. @ Cudahy Lane
Collection Date: 6/14/2010 1710h
Received Date: 6/14/2010 1950h
Method Used: SW8015D

Contact: Jim Harris

Analyzed: 6/17/2010 217h

Extracted: 6/15/2010 1022h

Analytical Results TPH-DRO (C10-C28) by GC/FID Method 8015D/UT Mod.

Units: mg/L

Dilution Factor: 1

463 West 3600 South
Salt Lake City, UT
84115

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics C10-C28	68476-34-6	8.0	< 8.0	
Surr: 4-Bromofluorobenzene	460-00-4	17-106	49.0	

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ORGANIC ANALYTICAL REPORT

AMERICAN
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LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-009D
Client Sample ID: Jordan @ 1800 N.
Collection Date: 6/14/2010 1730h
Received Date: 6/14/2010 1950h
Method Used: SW8015D

Contact: Jim Harris

Analyzed: 6/17/2010 238h

Extracted: 6/15/2010 1022h

Analytical Results TPH-DRO (C10-C28) by GC/FID Method 8015D/UT Mod.

Units: mg/L

Dilution Factor: 1

463 West 3600 South
Salt Lake City, UT
84115

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics C10-C28	68476-34-6	8.0	< 8.0	
Surr: 4-Bromofluorobenzene	460-00-4	17-106	45.5	

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ORGANIC ANALYTICAL REPORT

AMERICAN
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LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-010D
Client Sample ID: Jordan @ 300 N.
Collection Date: 6/14/2010 1750h
Received Date: 6/14/2010 1950h
Method Used: SW8015D

Contact: Jim Harris

Analyzed: 6/17/2010 259h

Extracted: 6/15/2010 1022h

Analytical Results TPH-DRO (C10-C28) by GC/FID Method 8015D/UT Mod.

Units: mg/L

Dilution Factor: 1

463 West 3600 South
Salt Lake City, UT
84115

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics C10-C28	68476-34-6	8.0	< 8.0	
Surr: 4-Bromofluorobenzene	460-00-4	17-106	52.2	

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ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
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LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-011D
Client Sample ID: Jordan @ 1700 S.
Collection Date: 6/14/2010 1820h
Received Date: 6/14/2010 1950h
Method Used: SW8015D

Contact: Jim Harris

Analyzed: 6/17/2010 319h

Extracted: 6/15/2010 1022h

Analytical Results TPH-DRO (C10-C28) by GC/FID Method 8015D/UT Mod.

Units: mg/L

Dilution Factor: 1

463 West 3600 South
Salt Lake City, UT
84115

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics C10-C28	68476-34-6	8.0	< 8.0	
Surr: 4-Bromofluorobenzene	460-00-4	17-106	50.0	

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ORGANIC ANALYTICAL REPORT

AMERICAN
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LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-001A
Client Sample ID: Red Butte Below Gardens
Collection Date: 6/14/2010 1120h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1246h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

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84115
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Jose Rocha
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1,1,1,2-Tetrachloroethane	630-20-6	20	< 20	
1,1,1-Trichloroethane	71-55-6	20	< 20	
1,1,2,2-Tetrachloroethane	79-34-5	20	< 20	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	20	< 20	
1,1,2-Trichloroethane	79-00-5	20	< 20	
1,1-Dichloro-1-propene	563-58-6	20	< 20	
1,1-Dichloroethane	75-34-3	20	< 20	
1,1-Dichloroethene	75-35-4	20	< 20	
1,2,3-Trichlorobenzene	87-61-6	20	< 20	
1,2,3-Trichloropropane	96-18-4	20	< 20	
1,2,3-Trimethylbenzene	526-73-8	20	< 20	
1,2,4-Trichlorobenzene	120-82-1	20	< 20	
1,2,4-Trimethylbenzene	95-63-6	20	< 20	
1,2-Dibromo-3-chloropropane	96-12-8	20	< 20	
1,2-Dibromoethane	106-93-4	20	< 20	
1,2-Dichlorobenzene	95-50-1	20	< 20	
1,2-Dichloroethane	107-06-2	20	< 20	
1,2-Dichloropropane	78-87-5	20	< 20	
1,3,5-Trimethylbenzene	108-67-8	20	< 20	
1,3-Dichlorobenzene	541-73-1	20	< 20	
1,3-Dichloropropane	142-28-9	20	< 20	
1,4-Dichlorobenzene	106-46-7	20	< 20	
1,4-Dioxane	123-91-1	400	< 400	
2,2-Dichloropropane	594-20-7	20	< 20	
2-Butanone	78-93-3	100	< 100	
2-Chloroethyl vinyl ether	110-75-8	50	< 50	
2-Chlorotoluene	95-49-8	20	< 20	
2-Hexanone	591-78-6	50	< 50	
2-Nitropropane	79-46-9	20	< 20	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-001A
Client Sample ID: Red Butte Below Gardens
Collection Date: 6/14/2010 1120h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1246h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	4-Chlorotoluene	106-43-4	20	< 20
	4-Isopropyltoluene	99-87-6	20	< 20
	4-Methyl-2-pentanone	108-10-1	50	< 50
	Acetone	67-64-1	100	< 100
(801) 263-8686	Acetonitrile	75-05-8	50	< 50
Toll Free (888) 263-8686	Acrolein	107-02-8	50	< 50
Fax (801)263-8687	Acrylonitrile	107-13-1	100	< 100
email: awal@awal-labs.com	Allyl chloride	107-05-1	50	< 50
	Benzene	71-43-2	20	< 20
Kyle F. Gross	Benzyl chloride	100-44-7	50	< 50
Laboratory Director	Bis(2-chloroisopropyl) ether	108-60-1	50	< 50
	Bromobenzene	108-86-1	20	< 20
Jose Rocha	Bromochloromethane	74-97-5	20	< 20
QA Officer	Bromodichloromethane	75-27-4	20	< 20
	Bromoform	75-25-2	20	< 20
	Bromomethane	74-83-9	50	< 50
	Butyl acetate	123-86-4	50	< 50
	Carbon disulfide	75-15-0	20	< 20
	Carbon tetrachloride	56-23-5	20	< 20
	Chlorobenzene	108-90-7	20	< 20
	Chloroethane	75-00-3	20	< 20
	Chloroform	67-66-3	20	< 20
	Chloromethane	74-87-3	50	< 50
	Chloroprene	126-99-8	20	< 20
	cis-1,2-Dichloroethene	156-59-2	20	< 20
	cis-1,3-Dichloropropene	10061-01-5	20	< 20
	Cyclohexane	110-82-7	20	< 20
	Cyclohexanone	108-94-1	500	< 500
	Dibromochloromethane	124-48-1	20	< 20



ORGANIC ANALYTICAL REPORT

AMERICAN
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LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-001A
Client Sample ID: Red Butte Below Gardens
Collection Date: 6/14/2010 1120h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1246h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L
Dilution Factor: 10

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
84115 Dibromomethane	74-95-3	20	< 20	
Dichlorodifluoromethane	75-71-8	20	< 20	
Ethyl acetate	141-78-6	100	< 100	
Ethyl ether	60-29-7	100	< 100	
(801) 263-8686 Ethyl methacrylate	97-63-2	20	< 20	
Toll Free (888) 263-8686 Ethylbenzene	100-41-4	20	< 20	
Fax (801)263-8687 Hexachlorobutadiene	87-68-3	20	< 20	
email: awal@awal-labs.com Iodomethane	74-88-4	50	< 50	
Isobutyl alcohol	78-83-1	1,000	< 1,000	
Kyle F. Gross Isopropyl acetate	108-21-4	20	< 20	
Laboratory Director Isopropyl alcohol	67-63-0	250	< 250	
Isopropylbenzene	98-82-8	20	< 20	
Isopropyltoluene	99-87-6	20	< 20	
Jose Rocha m,p-Xylene	179601-23-1	20	< 20	
QA Officer Methacrylonitrile	126-98-7	50	< 50	
Methyl Acetate	79-20-9	50	< 50	
Methyl methacrylate	80-62-6	50	< 50	
Methyl tert-butyl ether	1634-04-4	20	< 20	
Methylcyclohexane	108-87-2	20	< 20	
Methylene chloride	75-09-2	20	< 20	
n-Amyl acetate	628-63-7	20	< 20	
n-Butyl alcohol	71-36-3	250	< 250	
n-Butylbenzene	104-51-8	20	< 20	
n-Hexane	110-54-3	20	< 20	
n-Octane	111-65-9	20	< 20	
n-Propylbenzene	103-65-1	20	< 20	
Naphthalene	91-20-3	20	< 20	
o-Xylene	95-47-6	20	< 20	
Pentachloroethane	76-01-7	20	< 20	



ORGANIC ANALYTICAL REPORT

AMERICAN
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LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-001A
Client Sample ID: Red Butte Below Gardens
Collection Date: 6/14/2010 1120h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1246h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
84115 Propionitrile	107-12-0	250	< 250	
Propyl acetate	109-60-4	20	< 20	
sec-Butylbenzene	135-98-8	20	< 20	
Styrene	100-42-5	20	< 20	
(801) 263-8686 tert-Butyl alcohol	76-65-0	200	< 200	
Toll Free (888) 263-8686 tert-Butylbenzene	98-06-6	20	< 20	
Fax (801)263-8687 Tetrachloroethene	127-18-4	20	< 20	
email: awal@awal-labs.com Tetrahydrofuran	109-99-9	20	< 20	
Toluene	108-88-3	20	< 20	
Kyle F. Gross Laboratory Director trans-1,2-Dichloroethene	156-60-5	20	< 20	
trans-1,3-Dichloropropene	10061-02-6	20	< 20	
trans-1,4-Dichloro-2-butene	110-57-6	20	< 20	
Trichloroethene	79-01-6	20	< 20	
Jose Rocha QA Officer Trichlorofluoromethane	75-69-4	20	< 20	
Vinyl acetate	108-05-4	50	< 50	
Vinyl chloride	75-01-4	10	< 10	
Xylenes, Total	1330-20-7	20	< 20	
TPH C6-C10 (GRO)		200	< 200	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	106	
Surr: 4-Bromofluorobenzene	460-00-4	80-123	101	
Surr: Dibromofluoromethane	1868-53-7	80-124	102	
Surr: Toluene-d8	2037-26-5	80-125	101	

*The pH of the sample was >2. Analysis was performed within the 7 day holding time.
The reporting limits were raised due to sample matrix interferences.*



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-002A
Client Sample ID: Red Butte @ 1100 E.
Collection Date: 6/14/2010 1220h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1305h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT
84115
(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

1,1,1,2-Tetrachloroethane	630-20-6	20	< 20	
1,1,1-Trichloroethane	71-55-6	20	< 20	
1,1,2,2-Tetrachloroethane	79-34-5	20	< 20	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	20	< 20	
1,1,2-Trichloroethane	79-00-5	20	< 20	
1,1-Dichloro-1-propene	563-58-6	20	< 20	
1,1-Dichloroethane	75-34-3	20	< 20	
1,1-Dichloroethene	75-35-4	20	< 20	
1,2,3-Trichlorobenzene	87-61-6	20	< 20	
1,2,3-Trichloropropane	96-18-4	20	< 20	
1,2,3-Trimethylbenzene	526-73-8	20	< 20	
1,2,4-Trichlorobenzene	120-82-1	20	< 20	
1,2,4-Trimethylbenzene	95-63-6	20	< 20	
1,2-Dibromo-3-chloropropane	96-12-8	20	< 20	
1,2-Dibromoethane	106-93-4	20	< 20	
1,2-Dichlorobenzene	95-50-1	20	< 20	
1,2-Dichloroethane	107-06-2	20	< 20	
1,2-Dichloropropane	78-87-5	20	< 20	
1,3,5-Trimethylbenzene	108-67-8	20	< 20	
1,3-Dichlorobenzene	541-73-1	20	< 20	
1,3-Dichloropropane	142-28-9	20	< 20	
1,4-Dichlorobenzene	106-46-7	20	< 20	
1,4-Dioxane	123-91-1	400	< 400	
2,2-Dichloropropane	594-20-7	20	< 20	
2-Butanone	78-93-3	100	< 100	
2-Chloroethyl vinyl ether	110-75-8	50	< 50	
2-Chlorotoluene	95-49-8	20	< 20	
2-Hexanone	591-78-6	50	< 50	
2-Nitropropane	79-46-9	20	< 20	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-002A
Client Sample ID: Red Butte @ 1100 E.
Collection Date: 6/14/2010 1220h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1305h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	4-Chlorotoluene	106-43-4	20	< 20
	4-Isopropyltoluene	99-87-6	20	< 20
	4-Methyl-2-pentanone	108-10-1	50	< 50
	Acetone	67-64-1	100	< 100
(801) 263-8686	Acetonitrile	75-05-8	50	< 50
Toll Free (888) 263-8686	Acrolein	107-02-8	50	< 50
Fax (801)263-8687	Acrylonitrile	107-13-1	100	< 100
email: awal@awal-labs.com	Allyl chloride	107-05-1	50	< 50
	Benzene	71-43-2	20	< 20
Kyle F. Gross	Benzyl chloride	100-44-7	50	< 50
Laboratory Director	Bis(2-chloroisopropyl) ether	108-60-1	50	< 50
	Bromobenzene	108-86-1	20	< 20
Jose Rocha	Bromochloromethane	74-97-5	20	< 20
QA Officer	Bromodichloromethane	75-27-4	20	< 20
	Bromoform	75-25-2	20	< 20
	Bromomethane	74-83-9	50	< 50
	Butyl acetate	123-86-4	50	< 50
	Carbon disulfide	75-15-0	20	< 20
	Carbon tetrachloride	56-23-5	20	< 20
	Chlorobenzene	108-90-7	20	< 20
	Chloroethane	75-00-3	20	< 20
	Chloroform	67-66-3	20	< 20
	Chloromethane	74-87-3	50	< 50
	Chloroprene	126-99-8	20	< 20
	cis-1,2-Dichloroethene	156-59-2	20	< 20
	cis-1,3-Dichloropropene	10061-01-5	20	< 20
	Cyclohexane	110-82-7	20	< 20
	Cyclohexanone	108-94-1	500	< 500
	Dibromochloromethane	124-48-1	20	< 20

Report Date: 6/17/2010 Page 40 of 103



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-002A
Client Sample ID: Red Butte @ 1100 E.
Collection Date: 6/14/2010 1220h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1305h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT

(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

84115	Dibromomethane	74-95-3	20	< 20	
	Dichlorodifluoromethane	75-71-8	20	< 20	
	Ethyl acetate	141-78-6	100	< 100	
	Ethyl ether	60-29-7	100	< 100	
	Ethyl methacrylate	97-63-2	20	< 20	
	Ethylbenzene	100-41-4	20	< 20	
	Hexachlorobutadiene	87-68-3	20	< 20	
	Iodomethane	74-88-4	50	< 50	
	Isobutyl alcohol	78-83-1	1,000	< 1,000	
	Isopropyl acetate	108-21-4	20	< 20	
	Isopropyl alcohol	67-63-0	250	< 250	
	Isopropylbenzene	98-82-8	20	< 20	
	Isopropyltoluene	99-87-6	20	< 20	
	m,p-Xylene	179601-23-1	20	< 20	
	Methacrylonitrile	126-98-7	50	< 50	
	Methyl Acetate	79-20-9	50	< 50	
	Methyl methacrylate	80-62-6	50	< 50	
	Methyl tert-butyl ether	1634-04-4	20	< 20	
	Methylcyclohexane	108-87-2	20	< 20	
	Methylene chloride	75-09-2	20	< 20	
	n-Amyl acetate	628-63-7	20	< 20	
	n-Butyl alcohol	71-36-3	250	< 250	
	n-Butylbenzene	104-51-8	20	< 20	
	n-Hexane	110-54-3	20	< 20	
	n-Octane	111-65-9	20	< 20	
	n-Propylbenzene	103-65-1	20	< 20	
	Naphthalene	91-20-3	20	28	
	o-Xylene	95-47-6	20	< 20	
	Pentachloroethane	76-01-7	20	< 20	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-002A
Client Sample ID: Red Butte @ 1100 E.
Collection Date: 6/14/2010 1220h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1305h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	Propionitrile	107-12-0	250	< 250	
	Propyl acetate	109-60-4	20	< 20	
	sec-Butylbenzene	135-98-8	20	< 20	
	Styrene	100-42-5	20	< 20	
(801) 263-8686	tert-Butyl alcohol	76-65-0	200	< 200	
Toll Free (888) 263-8686	tert-Butylbenzene	98-06-6	20	< 20	
Fax (801)263-8687	Tetrachloroethene	127-18-4	20	< 20	
email: awal@awal-labs.com	Tetrahydrofuran	109-99-9	20	< 20	
	Toluene	108-88-3	20	< 20	
Kyle F. Gross	trans-1,2-Dichloroethene	156-60-5	20	< 20	
Laboratory Director	trans-1,3-Dichloropropene	10061-02-6	20	< 20	
	trans-1,4-Dichloro-2-butene	110-57-6	20	< 20	
	Trichloroethene	79-01-6	20	< 20	
Jose Rocha	Trichlorofluoromethane	75-69-4	20	< 20	
QA Officer	Vinyl acetate	108-05-4	50	< 50	
	Vinyl chloride	75-01-4	10	< 10	
	Xylenes, Total	1330-20-7	20	< 20	
	TPH C6-C10 (GRO)		200	< 200	
	Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	104	
	Surr: 4-Bromofluorobenzene	460-00-4	80-123	101	
	Surr: Dibromofluoromethane	1868-53-7	80-124	99.4	
	Surr: Toluene-d8	2037-26-5	80-125	102	

The pH of the sample was >2. Analysis was performed within the 7 day holding time.

The reporting limits were raised due to sample matrix interferences.



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-003A
Client Sample ID: 1300 S. Storm Drain
Collection Date: 6/14/2010 1300h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1324h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	1,1,1,2-Tetrachloroethane	630-20-6	20	< 20
	1,1,1-Trichloroethane	71-55-6	20	< 20
	1,1,2,2-Tetrachloroethane	79-34-5	20	< 20
	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	20	< 20
(801) 263-8686	1,1,2-Trichloroethane	79-00-5	20	< 20
Toll Free (888) 263-8686	1,1-Dichloro-1-propene	563-58-6	20	< 20
Fax (801)263-8687	1,1-Dichloroethane	75-34-3	20	< 20
email: awal@awal-labs.com	1,1-Dichloroethene	75-35-4	20	< 20
	1,2,3-Trichlorobenzene	87-61-6	20	< 20
Kyle F. Gross	1,2,3-Trichloropropane	96-18-4	20	< 20
Laboratory Director	1,2,3-Trimethylbenzene	526-73-8	20	< 20
	1,2,4-Trichlorobenzene	120-82-1	20	< 20
Jose Rocha	1,2,4-Trimethylbenzene	95-63-6	20	< 20
QA Officer	1,2-Dibromo-3-chloropropane	96-12-8	20	< 20
	1,2-Dibromoethane	106-93-4	20	< 20
	1,2-Dichlorobenzene	95-50-1	20	< 20
	1,2-Dichloroethane	107-06-2	20	< 20
	1,2-Dichloropropane	78-87-5	20	< 20
	1,3,5-Trimethylbenzene	108-67-8	20	< 20
	1,3-Dichlorobenzene	541-73-1	20	< 20
	1,3-Dichloropropane	142-28-9	20	< 20
	1,4-Dichlorobenzene	106-46-7	20	< 20
	1,4-Dioxane	123-91-1	400	< 400
	2,2-Dichloropropane	594-20-7	20	< 20
	2-Butanone	78-93-3	100	< 100
	2-Chloroethyl vinyl ether	110-75-8	50	< 50
	2-Chlorotoluene	95-49-8	20	< 20
	2-Hexanone	591-78-6	50	< 50
	2-Nitropropane	79-46-9	20	< 20



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-003A
Client Sample ID: 1300 S. Storm Drain
Collection Date: 6/14/2010 1300h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1324h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	4-Chlorotoluene	106-43-4	20	< 20
	4-Isopropyltoluene	99-87-6	20	< 20
	4-Methyl-2-pentanone	108-10-1	50	< 50
	Acetone	67-64-1	100	< 100
(801) 263-8686	Acetonitrile	75-05-8	50	< 50
Toll Free (888) 263-8686	Acrolein	107-02-8	50	< 50
Fax (801)263-8687	Acrylonitrile	107-13-1	100	< 100
email: awal@awal-labs.com	Allyl chloride	107-05-1	50	< 50
	Benzene	71-43-2	20	< 20
Kyle F. Gross	Benzyl chloride	100-44-7	50	< 50
Laboratory Director	Bis(2-chloroisopropyl) ether	108-60-1	50	< 50
	Bromobenzene	108-86-1	20	< 20
Jose Rocha	Bromochloromethane	74-97-5	20	< 20
QA Officer	Bromodichloromethane	75-27-4	20	< 20
	Bromoform	75-25-2	20	< 20
	Bromomethane	74-83-9	50	< 50
	Butyl acetate	123-86-4	50	< 50
	Carbon disulfide	75-15-0	20	< 20
	Carbon tetrachloride	56-23-5	20	< 20
	Chlorobenzene	108-90-7	20	< 20
	Chloroethane	75-00-3	20	< 20
	Chloroform	67-66-3	20	< 20
	Chloromethane	74-87-3	50	< 50
	Chloroprene	126-99-8	20	< 20
	cis-1,2-Dichloroethene	156-59-2	20	< 20
	cis-1,3-Dichloropropene	10061-01-5	20	< 20
	Cyclohexane	110-82-7	20	< 20
	Cyclohexanone	108-94-1	500	< 500
	Dibromochloromethane	124-48-1	20	< 20

Report Date: 6/17/2010 Page 44 of 103



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-003A
Client Sample ID: 1300 S. Storm Drain
Collection Date: 6/14/2010 1300h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1324h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
84115 Dibromomethane	74-95-3	20	< 20	
Dichlorodifluoromethane	75-71-8	20	< 20	
Ethyl acetate	141-78-6	100	< 100	
Ethyl ether	60-29-7	100	< 100	
(801) 263-8686 Ethyl methacrylate	97-63-2	20	< 20	
Toll Free (888) 263-8686 Ethylbenzene	100-41-4	20	< 20	
Fax (801)263-8687 Hexachlorobutadiene	87-68-3	20	< 20	
email: awal@awal-labs.com Iodomethane	74-88-4	50	< 50	
Isobutyl alcohol	78-83-1	1,000	< 1,000	
Kyle F. Gross Isopropyl acetate	108-21-4	20	< 20	
Laboratory Director Isopropyl alcohol	67-63-0	250	< 250	
Isopropylbenzene	98-82-8	20	< 20	
Isopropyltoluene	99-87-6	20	< 20	
Jose Rocha m,p-Xylene	179601-23-1	20	< 20	
QA Officer Methacrylonitrile	126-98-7	50	< 50	
Methyl Acetate	79-20-9	50	< 50	
Methyl methacrylate	80-62-6	50	< 50	
Methyl tert-butyl ether	1634-04-4	20	< 20	
Methylcyclohexane	108-87-2	20	< 20	
Methylene chloride	75-09-2	20	< 20	
n-Amyl acetate	628-63-7	20	< 20	
n-Butyl alcohol	71-36-3	250	< 250	
n-Butylbenzene	104-51-8	20	< 20	
n-Hexane	110-54-3	20	< 20	
n-Octane	111-65-9	20	< 20	
n-Propylbenzene	103-65-1	20	< 20	
Naphthalene	91-20-3	20	21	
o-Xylene	95-47-6	20	< 20	
Pentachloroethane	76-01-7	20	< 20	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-003A
Client Sample ID: 1300 S. Storm Drain
Collection Date: 6/14/2010 1300h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1324h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
84115 Propionitrile	107-12-0	250	< 250	
Propyl acetate	109-60-4	20	< 20	
sec-Butylbenzene	135-98-8	20	< 20	
Styrene	100-42-5	20	< 20	
(801) 263-8686 tert-Butyl alcohol	76-65-0	200	< 200	
Toll Free (888) 263-8686 tert-Butylbenzene	98-06-6	20	< 20	
Fax (801)263-8687 Tetrachloroethene	127-18-4	20	< 20	
email: awal@awal-labs.com Tetrahydrofuran	109-99-9	20	< 20	
Toluene	108-88-3	20	< 20	
Kyle F. Gross trans-1,2-Dichloroethene	156-60-5	20	< 20	
Laboratory Director trans-1,3-Dichloropropene	10061-02-6	20	< 20	
trans-1,4-Dichloro-2-butene	110-57-6	20	< 20	
Trichloroethene	79-01-6	20	< 20	
Jose Rocha Trichlorofluoromethane	75-69-4	20	< 20	
QA Officer Vinyl acetate	108-05-4	50	< 50	
Vinyl chloride	75-01-4	10	< 10	
Xylenes, Total	1330-20-7	20	< 20	
TPH C6-C10 (GRO)		200	< 200	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	105	
Surr: 4-Bromofluorobenzene	460-00-4	80-123	102	
Surr: Dibromofluoromethane	1868-53-7	80-124	102	
Surr: Toluene-d8	2037-26-5	80-125	101	

*The pH of the sample was >2. Analysis was performed within the 7 day holding time.
The reporting limits were raised due to sample matrix interferences.*



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-004A
Client Sample ID: 900 S. Storm Drain
Collection Date: 6/14/2010 1418h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1343h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	1,1,1,2-Tetrachloroethane	630-20-6	20	< 20
	1,1,1-Trichloroethane	71-55-6	20	< 20
	1,1,2,2-Tetrachloroethane	79-34-5	20	< 20
	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	20	< 20
(801) 263-8686	1,1,2-Trichloroethane	79-00-5	20	< 20
Toll Free (888) 263-8686	1,1-Dichloro-1-propene	563-58-6	20	< 20
Fax (801)263-8687	1,1-Dichloroethane	75-34-3	20	< 20
email: awal@awal-labs.com	1,1-Dichloroethene	75-35-4	20	< 20
	1,2,3-Trichlorobenzene	87-61-6	20	< 20
Kyle F. Gross	1,2,3-Trichloropropane	96-18-4	20	< 20
Laboratory Director	1,2,3-Trimethylbenzene	526-73-8	20	< 20
	1,2,4-Trichlorobenzene	120-82-1	20	< 20
Jose Rocha	1,2,4-Trimethylbenzene	95-63-6	20	< 20
QA Officer	1,2-Dibromo-3-chloropropane	96-12-8	20	< 20
	1,2-Dibromoethane	106-93-4	20	< 20
	1,2-Dichlorobenzene	95-50-1	20	< 20
	1,2-Dichloroethane	107-06-2	20	< 20
	1,2-Dichloropropane	78-87-5	20	< 20
	1,3,5-Trimethylbenzene	108-67-8	20	< 20
	1,3-Dichlorobenzene	541-73-1	20	< 20
	1,3-Dichloropropane	142-28-9	20	< 20
	1,4-Dichlorobenzene	106-46-7	20	< 20
	1,4-Dioxane	123-91-1	400	< 400
	2,2-Dichloropropane	594-20-7	20	< 20
	2-Butanone	78-93-3	100	< 100
	2-Chloroethyl vinyl ether	110-75-8	50	< 50
	2-Chlorotoluene	95-49-8	20	< 20
	2-Hexanone	591-78-6	50	< 50
	2-Nitropropane	79-46-9	20	< 20

Report Date: 6/17/2010 Page 47 of 103



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-004A
Client Sample ID: 900 S. Storm Drain
Collection Date: 6/14/2010 1418h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1343h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT
84115
(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

84115	4-Chlorotoluene	106-43-4	20	< 20	
	4-Isopropyltoluene	99-87-6	20	< 20	
	4-Methyl-2-pentanone	108-10-1	50	< 50	
	Acetone	67-64-1	100	< 100	
(801) 263-8686	Acetonitrile	75-05-8	50	< 50	
Toll Free (888) 263-8686	Acrolein	107-02-8	50	< 50	
Fax (801)263-8687	Acrylonitrile	107-13-1	100	< 100	
email: awal@awal-labs.com	Allyl chloride	107-05-1	50	< 50	
	Benzene	71-43-2	20	< 20	
Kyle F. Gross	Benzyl chloride	100-44-7	50	< 50	
Laboratory Director	Bis(2-chloroisopropyl) ether	108-60-1	50	< 50	
	Bromobenzene	108-86-1	20	< 20	
Jose Rocha	Bromochloromethane	74-97-5	20	< 20	
QA Officer	Bromodichloromethane	75-27-4	20	< 20	
	Bromoform	75-25-2	20	< 20	
	Bromomethane	74-83-9	50	< 50	
	Butyl acetate	123-86-4	50	< 50	
	Carbon disulfide	75-15-0	20	< 20	
	Carbon tetrachloride	56-23-5	20	< 20	
	Chlorobenzene	108-90-7	20	< 20	
	Chloroethane	75-00-3	20	< 20	
	Chloroform	67-66-3	20	< 20	
	Chloromethane	74-87-3	50	< 50	
	Chloroprene	126-99-8	20	< 20	
	cis-1,2-Dichloroethene	156-59-2	20	< 20	
	cis-1,3-Dichloropropene	10061-01-5	20	< 20	
	Cyclohexane	110-82-7	20	< 20	
	Cyclohexanone	108-94-1	500	< 500	
	Dibromochloromethane	124-48-1	20	< 20	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-004A
Client Sample ID: 900 S. Storm Drain
Collection Date: 6/14/2010 1418h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1343h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT
84115
(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
84115 Dibromomethane	74-95-3	20	< 20	
Dichlorodifluoromethane	75-71-8	20	< 20	
Ethyl acetate	141-78-6	100	< 100	
Ethyl ether	60-29-7	100	< 100	
(801) 263-8686 Ethyl methacrylate	97-63-2	20	< 20	
Toll Free (888) 263-8686 Ethylbenzene	100-41-4	20	< 20	
Fax (801)263-8687 Hexachlorobutadiene	87-68-3	20	< 20	
email: awal@awal-labs.com Iodomethane	74-88-4	50	< 50	
Isobutyl alcohol	78-83-1	1,000	< 1,000	
Kyle F. Gross Isopropyl acetate	108-21-4	20	< 20	
Laboratory Director Isopropyl alcohol	67-63-0	250	< 250	
Isopropylbenzene	98-82-8	20	< 20	
Isopropyltoluene	99-87-6	20	< 20	
Jose Rocha m,p-Xylene	179601-23-1	20	< 20	
QA Officer Methacrylonitrile	126-98-7	50	< 50	
Methyl Acetate	79-20-9	50	< 50	
Methyl methacrylate	80-62-6	50	< 50	
Methyl tert-butyl ether	1634-04-4	20	< 20	
Methylcyclohexane	108-87-2	20	< 20	
Methylene chloride	75-09-2	20	< 20	
n-Amyl acetate	628-63-7	20	< 20	
n-Butyl alcohol	71-36-3	250	< 250	
n-Butylbenzene	104-51-8	20	< 20	
n-Hexane	110-54-3	20	< 20	
n-Octane	111-65-9	20	< 20	
n-Propylbenzene	103-65-1	20	< 20	
Naphthalene	91-20-3	20	22	
o-Xylene	95-47-6	20	< 20	
Pentachloroethane	76-01-7	20	< 20	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-004A
Client Sample ID: 900 S. Storm Drain
Collection Date: 6/14/2010 1418h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1343h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	Propionitrile	107-12-0	250	< 250	
	Propyl acetate	109-60-4	20	< 20	
	sec-Butylbenzene	135-98-8	20	< 20	
	Styrene	100-42-5	20	< 20	
(801) 263-8686	tert-Butyl alcohol	76-65-0	200	< 200	
Toll Free (888) 263-8686	tert-Butylbenzene	98-06-6	20	< 20	
Fax (801)263-8687	Tetrachloroethene	127-18-4	20	< 20	
email: awal@awal-labs.com	Tetrahydrofuran	109-99-9	20	< 20	
	Toluene	108-88-3	20	< 20	
Kyle F. Gross	trans-1,2-Dichloroethene	156-60-5	20	< 20	
Laboratory Director	trans-1,3-Dichloropropene	10061-02-6	20	< 20	
	trans-1,4-Dichloro-2-butene	110-57-6	20	< 20	
	Trichloroethene	79-01-6	20	< 20	
Jose Rocha	Trichlorofluoromethane	75-69-4	20	< 20	
QA Officer	Vinyl acetate	108-05-4	50	< 50	
	Vinyl chloride	75-01-4	10	< 10	
	Xylenes, Total	1330-20-7	20	< 20	
	TPH C6-C10 (GRO)		200	< 200	
	Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	104	
	Surr: 4-Bromofluorobenzene	460-00-4	80-123	99.8	
	Surr: Dibromofluoromethane	1868-53-7	80-124	101	
	Surr: Toluene-d8	2037-26-5	80-125	102	

The pH of the sample was >2. Analysis was performed within the 7 day holding time.

The reporting limits were raised due to sample matrix interferences.



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-005A
Client Sample ID: Jordan @ Indiana
Collection Date: 6/14/2010 1500h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1402h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT
84115
(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

1,1,1,2-Tetrachloroethane	630-20-6	20	< 20	
1,1,1-Trichloroethane	71-55-6	20	< 20	
1,1,2,2-Tetrachloroethane	79-34-5	20	< 20	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	20	< 20	
1,1,2-Trichloroethane	79-00-5	20	< 20	
1,1-Dichloropropene	563-58-6	20	< 20	
1,1-Dichloroethane	75-34-3	20	< 20	
1,1-Dichloroethene	75-35-4	20	< 20	
1,2,3-Trichlorobenzene	87-61-6	20	< 20	
1,2,3-Trichloropropane	96-18-4	20	< 20	
1,2,3-Trimethylbenzene	526-73-8	20	< 20	
1,2,4-Trichlorobenzene	120-82-1	20	< 20	
1,2,4-Trimethylbenzene	95-63-6	20	< 20	
1,2-Dibromo-3-chloropropane	96-12-8	20	< 20	
1,2-Dibromoethane	106-93-4	20	< 20	
1,2-Dichlorobenzene	95-50-1	20	< 20	
1,2-Dichloroethane	107-06-2	20	< 20	
1,2-Dichloropropane	78-87-5	20	< 20	
1,3,5-Trimethylbenzene	108-67-8	20	< 20	
1,3-Dichlorobenzene	541-73-1	20	< 20	
1,3-Dichloropropane	142-28-9	20	< 20	
1,4-Dichlorobenzene	106-46-7	20	< 20	
1,4-Dioxane	123-91-1	400	< 400	
2,2-Dichloropropane	594-20-7	20	< 20	
2-Butanone	78-93-3	100	< 100	
2-Chloroethylvinylether	110-75-8	50	< 50	
o-Chlorotoluene	95-49-8	20	< 20	
2-Hexanone	591-78-6	50	< 50	
2-Nitropropane	79-46-9	20	< 20	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-005A
Client Sample ID: Jordan @ Indiana
Collection Date: 6/14/2010 1500h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1402h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT

(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

84115	p-Chlorotoluene	106-43-4	20	< 20
	Isopropyltoluene	99-87-6	20	< 20
	4-Methyl-2-pentanone	108-10-1	50	< 50
	Acetone	67-64-1	100	< 100
(801) 263-8686	Acetonitrile	75-05-8	50	< 50
Toll Free (888) 263-8686	Acrolein	107-02-8	50	< 50
Fax (801)263-8687	Acrylonitrile	107-13-1	100	< 100
email: awal@awal-labs.com	Allyl chloride	107-05-1	50	< 50
	Benzene	71-43-2	20	< 20
Kyle F. Gross	Benzyl chloride	100-44-7	50	< 50
Laboratory Director	Bis(2-chloroisopropyl) ether	108-60-1	50	< 50
	Bromobenzene	108-86-1	20	< 20
Jose Rocha	Bromochloromethane	74-97-5	20	< 20
QA Officer	Bromodichloromethane	75-27-4	20	< 20
	Bromoform	75-25-2	20	< 20
	Bromomethane	74-83-9	50	< 50
	Butyl acetate	123-86-4	50	< 50
	Carbon disulfide	75-15-0	20	< 20
	Carbon tetrachloride	56-23-5	20	< 20
	Chlorobenzene	108-90-7	20	< 20
	Chloroethane	75-00-3	20	< 20
	Chloroform	67-66-3	20	< 20
	Chloromethane	74-87-3	50	< 50
	2-Chloro-1,3-butadiene	126-99-8	20	< 20
	cis-1,2-Dichloroethene	156-59-2	20	< 20
	cis-1,3-Dichloropropene	10061-01-5	20	< 20
	Cyclohexane	110-82-7	20	< 20
	Cyclohexanone	108-94-1	500	< 500
	Dibromochloromethane	124-48-1	20	< 20

Report Date: 6/17/2010 Page 52 of 103



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-005A
Client Sample ID: Jordan @ Indiana
Collection Date: 6/14/2010 1500h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1402h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT

84115

(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

84115	Dibromomethane	74-95-3	20	< 20	
	Dichlorodifluoromethane	75-71-8	20	< 20	
	Ethyl acetate	141-78-6	100	< 100	
	Ethyl ether	60-29-7	100	< 100	
(801) 263-8686	Ethyl methacrylate	97-63-2	20	< 20	
Toll Free (888) 263-8686	Ethylbenzene	100-41-4	20	< 20	
Fax (801)263-8687	Hexachlorobutadiene	87-68-3	20	< 20	
email: awal@awal-labs.com	Iodomethane	74-88-4	50	< 50	
	Isobutyl alcohol	78-83-1	1,000	< 1,000	
Kyle F. Gross	Isopropyl acetate	108-21-4	20	< 20	
Laboratory Director	Isopropyl alcohol	67-63-0	250	< 250	
	Isopropylbenzene	98-82-8	20	< 20	
	Isopropyltoluene	99-87-6	20	< 20	
Jose Rocha	m,p-Xylene	179601-23-1	20	< 20	
QA Officer	Methacrylonitrile	126-98-7	50	< 50	
	Methyl Acetate	79-20-9	50	< 50	
	Methyl methacrylate	80-62-6	50	< 50	
	Methyl tert-butyl ether	1634-04-4	20	< 20	
	Methylcyclohexane	108-87-2	20	< 20	
	Dichloromethane	75-09-2	20	< 20	
	n-Amyl acetate	628-63-7	20	< 20	
	n-Butyl alcohol	71-36-3	250	< 250	
	n-Butylbenzene	104-51-8	20	< 20	
	n-Hexane	110-54-3	20	< 20	
	n-Octane	111-65-9	20	< 20	
	n-Propylbenzene	103-65-1	20	< 20	
	Naphthalene	91-20-3	20	< 20	
	1,2-Dimethylbenzene	95-47-6	20	< 20	
	Pentachloroethane	76-01-7	20	< 20	

Report Date: 6/17/2010 Page 53 of 103



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-005A
Client Sample ID: Jordan @ Indiana
Collection Date: 6/14/2010 1500h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1402h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 10

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	Propionitrile	107-12-0	250	< 250	
	Propyl acetate	109-60-4	20	< 20	
	sec-Butylbenzene	135-98-8	20	< 20	
	Styrene	100-42-5	20	< 20	
(801) 263-8686	tert-Butyl alcohol	76-65-0	200	< 200	
Toll Free (888) 263-8686	tert-Butylbenzene	98-06-6	20	< 20	
Fax (801)263-8687	Tetrachloroethene	127-18-4	20	< 20	
email: awal@awal-labs.com	Tetrahydrofuran	109-99-9	20	< 20	
	Toluene	108-88-3	20	< 20	
Kyle F. Gross	trans-1,2-Dichloroethene	156-60-5	20	< 20	
Laboratory Director	trans-1,3-Dichloropropene	10061-02-6	20	< 20	
	trans-1,4-Dichloro-2-butene	110-57-6	20	< 20	
	Trichlorethylene	79-01-6	20	< 20	
Jose Rocha	Trichlorofluoromethane	75-69-4	20	< 20	
QA Officer	Vinyl acetate	108-05-4	50	< 50	
	Vinyl chloride	75-01-4	10	< 10	
	Xylenes, Total	1330-20-7	20	< 20	
	TPH C6-C10 (GRO)		200	< 200	
	Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	104	
	Surr: 4-Bromofluorobenzene	460-00-4	80-123	101	
	Surr: Dibromofluoromethane	1868-53-7	80-124	101	
	Surr: Toluene-d8	2037-26-5	80-125	102	

The pH of the sample was >2. Analysis was performed within the 7 day holding time.

The reporting limits were raised due to sample matrix interferences.



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-006A
Client Sample ID: New State Canal
Collection Date: 6/14/2010 1610h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1052h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT

84115

1,1,1,2-Tetrachloroethane

630-20-6

2.0

< 2.0

1,1,1-Trichloroethane

71-55-6

2.0

< 2.0

1,1,2,2-Tetrachloroethane

79-34-5

2.0

< 2.0

1,1,2-Trichloro-1,2,2-trifluoroethane

76-13-1

2.0

< 2.0

(801) 263-8686

1,1,2-Trichloroethane

79-00-5

2.0

< 2.0

Toll Free (888) 263-8686

1,1-Dichloropropene

563-58-6

2.0

< 2.0

Fax (801)263-8687

1,1-Dichloroethane

75-34-3

2.0

< 2.0

email: awal@awal-labs.com

1,1-Dichloroethene

75-35-4

2.0

< 2.0

1,2,3-Trichlorobenzene

87-61-6

2.0

< 2.0

Kyle F. Gross

1,2,3-Trichloropropane

96-18-4

2.0

< 2.0

Laboratory Director

1,2,3-Trimethylbenzene

526-73-8

2.0

2.2

1,2,4-Trichlorobenzene

120-82-1

2.0

< 2.0

Jose Rocha

1,2,4-Trimethylbenzene

95-63-6

2.0

2.2

QA Officer

1,2-Dibromo-3-chloropropane

96-12-8

2.0

< 2.0

1,2-Dibromoethane

106-93-4

2.0

< 2.0

1,2-Dichlorobenzene

95-50-1

2.0

< 2.0

1,2-Dichloroethane

107-06-2

2.0

< 2.0

1,2-Dichloropropane

78-87-5

2.0

< 2.0

1,3,5-Trimethylbenzene

108-67-8

2.0

< 2.0

1,3-Dichlorobenzene

541-73-1

2.0

< 2.0

1,3-Dichloropropane

142-28-9

2.0

< 2.0

1,4-Dichlorobenzene

106-46-7

2.0

< 2.0

1,4-Dioxane

123-91-1

40

< 40

2,2-Dichloropropane

594-20-7

2.0

< 2.0

2-Butanone

78-93-3

10

< 10

2-Chloroethylvinylether

110-75-8

5.0

< 5.0

o-Chlorotoluene

95-49-8

2.0

< 2.0

2-Hexanone

591-78-6

5.0

< 5.0

2-Nitropropane

79-46-9

2.0

< 2.0

Report Date: 6/17/2010 Page 55 of 103



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-006A
Client Sample ID: New State Canal
Collection Date: 6/14/2010 1610h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1052h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT

(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

84115	p-Chlorotoluene	106-43-4	2.0	< 2.0	
	Isopropyltoluene	99-87-6	2.0	< 2.0	
	4-Methyl-2-pentanone	108-10-1	5.0	< 5.0	
	Acetone	67-64-1	10	< 10	
(801) 263-8686	Acetonitrile	75-05-8	5.0	< 5.0	
Toll Free (888) 263-8686	Acrolein	107-02-8	5.0	< 5.0	
Fax (801)263-8687	Acrylonitrile	107-13-1	10	< 10	
email: awal@awal-labs.com	Allyl chloride	107-05-1	5.0	< 5.0	
	Benzene	71-43-2	2.0	< 2.0	
Kyle F. Gross	Benzyl chloride	100-44-7	5.0	< 5.0	
Laboratory Director	Bis(2-chloroisopropyl) ether	108-60-1	5.0	< 5.0	
	Bromobenzene	108-86-1	2.0	< 2.0	
Jose Rocha	Bromochloromethane	74-97-5	2.0	< 2.0	
QA Officer	Bromodichloromethane	75-27-4	2.0	< 2.0	
	Bromoform	75-25-2	2.0	< 2.0	
	Bromomethane	74-83-9	5.0	< 5.0	
	Butyl acetate	123-86-4	5.0	< 5.0	
	Carbon disulfide	75-15-0	2.0	< 2.0	
	Carbon tetrachloride	56-23-5	2.0	< 2.0	
	Chlorobenzene	108-90-7	2.0	< 2.0	
	Chloroethane	75-00-3	2.0	< 2.0	
	Chloroform	67-66-3	2.0	< 2.0	
	Chloromethane	74-87-3	5.0	< 5.0	
	2-Chloro-1,3-butadiene	126-99-8	2.0	< 2.0	
	cis-1,2-Dichloroethene	156-59-2	2.0	< 2.0	
	cis-1,3-Dichloropropene	10061-01-5	2.0	< 2.0	
	Cyclohexane	110-82-7	2.0	< 2.0	
	Cyclohexanone	108-94-1	50	< 50	
	Dibromochloromethane	124-48-1	2.0	< 2.0	

Report Date: 6/17/2010 Page 56 of 103



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-006A
Client Sample ID: New State Canal
Collection Date: 6/14/2010 1610h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1052h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT
84115
(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

84115	Dibromomethane	74-95-3	2.0	< 2.0	
	Dichlorodifluoromethane	75-71-8	2.0	< 2.0	
	Ethyl acetate	141-78-6	10	< 10	
	Ethyl ether	60-29-7	10	< 10	
(801) 263-8686	Ethyl methacrylate	97-63-2	2.0	< 2.0	
Toll Free (888) 263-8686	Ethylbenzene	100-41-4	2.0	< 2.0	
Fax (801)263-8687	Hexachlorobutadiene	87-68-3	2.0	< 2.0	
email: awal@awal-labs.com	Iodomethane	74-88-4	5.0	< 5.0	
	Isobutyl alcohol	78-83-1	100	< 100	
Kyle F. Gross	Isopropyl acetate	108-21-4	2.0	< 2.0	
Laboratory Director	Isopropyl alcohol	67-63-0	25	< 25	
	Isopropylbenzene	98-82-8	2.0	< 2.0	
	Isopropyltoluene	99-87-6	2.0	< 2.0	
Jose Rocha	m,p-Xylene	179601-23-1	2.0	< 2.0	
QA Officer	Methacrylonitrile	126-98-7	5.0	< 5.0	
	Methyl Acetate	79-20-9	5.0	< 5.0	
	Methyl methacrylate	80-62-6	5.0	< 5.0	
	Methyl tert-butyl ether	1634-04-4	2.0	< 2.0	
	Methylcyclohexane	108-87-2	2.0	< 2.0	
	Dichloromethane	75-09-2	2.0	< 2.0	
	n-Amyl acetate	628-63-7	2.0	< 2.0	
	n-Butyl alcohol	71-36-3	25	< 25	
	n-Butylbenzene	104-51-8	2.0	< 2.0	
	n-Hexane	110-54-3	2.0	< 2.0	
	n-Octane	111-65-9	2.0	< 2.0	
	n-Propylbenzene	103-65-1	2.0	< 2.0	
	Naphthalene	91-20-3	2.0	3.2	
	1,2-Dimethylbenzene	95-47-6	2.0	< 2.0	
	Pentachloroethane	76-01-7	2.0	< 2.0	

Report Date: 6/17/2010 Page 57 of 103



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-006A
Client Sample ID: New State Canal
Collection Date: 6/14/2010 1610h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1052h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	Propionitrile	107-12-0	25	< 25	
	Propyl acetate	109-60-4	2.0	< 2.0	
	sec-Butylbenzene	135-98-8	2.0	< 2.0	
	Styrene	100-42-5	2.0	< 2.0	
(801) 263-8686	tert-Butyl alcohol	76-65-0	20	< 20	
Toll Free (888) 263-8686	tert-Butylbenzene	98-06-6	2.0	< 2.0	
Fax (801)263-8687	Tetrachloroethene	127-18-4	2.0	< 2.0	
email: awal@awal-labs.com	Tetrahydrofuran	109-99-9	2.0	< 2.0	
	Toluene	108-88-3	2.0	< 2.0	
Kyle F. Gross	trans-1,2-Dichloroethene	156-60-5	2.0	< 2.0	
Laboratory Director	trans-1,3-Dichloropropene	10061-02-6	2.0	< 2.0	
	trans-1,4-Dichloro-2-butene	110-57-6	2.0	< 2.0	
	Trichlorethylene	79-01-6	2.0	< 2.0	
Jose Rocha	Trichlorofluoromethane	75-69-4	2.0	< 2.0	
QA Officer	Vinyl acetate	108-05-4	5.0	< 5.0	
	Vinyl chloride	75-01-4	1.0	< 1.0	
	Xylenes, Total	1330-20-7	2.0	< 2.0	
	TPH C6-C10 (GRO)		20	< 20	
	Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	103	
	Surr: 4-Bromofluorobenzene	460-00-4	80-123	99.7	
	Surr: Dibromofluoromethane	1868-53-7	80-124	102	
	Surr: Toluene-d8	2037-26-5	80-125	101	

The pH of the sample was >2. Analysis was performed within the 7 day holding time.



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-007A
Client Sample ID: Burnham Dam
Collection Date: 6/14/2010 1630h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1111h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT
84115
(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

1,1,1,2-Tetrachloroethane	630-20-6	2.0	< 2.0	
1,1,1-Trichloroethane	71-55-6	2.0	< 2.0	
1,1,2,2-Tetrachloroethane	79-34-5	2.0	< 2.0	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.0	< 2.0	
1,1,2-Trichloroethane	79-00-5	2.0	< 2.0	
1,1-Dichloropropene	563-58-6	2.0	< 2.0	
1,1-Dichloroethane	75-34-3	2.0	< 2.0	
1,1-Dichloroethene	75-35-4	2.0	< 2.0	
1,2,3-Trichlorobenzene	87-61-6	2.0	< 2.0	
1,2,3-Trichloropropane	96-18-4	2.0	< 2.0	
1,2,3-Trimethylbenzene	526-73-8	2.0	2.3	
1,2,4-Trichlorobenzene	120-82-1	2.0	< 2.0	
1,2,4-Trimethylbenzene	95-63-6	2.0	2.1	
1,2-Dibromo-3-chloropropane	96-12-8	2.0	< 2.0	
1,2-Dibromoethane	106-93-4	2.0	< 2.0	
1,2-Dichlorobenzene	95-50-1	2.0	< 2.0	
1,2-Dichloroethane	107-06-2	2.0	< 2.0	
1,2-Dichloropropane	78-87-5	2.0	< 2.0	
1,3,5-Trimethylbenzene	108-67-8	2.0	< 2.0	
1,3-Dichlorobenzene	541-73-1	2.0	< 2.0	
1,3-Dichloropropane	142-28-9	2.0	< 2.0	
1,4-Dichlorobenzene	106-46-7	2.0	< 2.0	
1,4-Dioxane	123-91-1	40	< 40	
2,2-Dichloropropane	594-20-7	2.0	< 2.0	
2-Butanone	78-93-3	10	< 10	
2-Chloroethylvinylether	110-75-8	5.0	< 5.0	
o-Chlorotoluene	95-49-8	2.0	< 2.0	
2-Hexanone	591-78-6	5.0	< 5.0	
2-Nitropropane	79-46-9	2.0	< 2.0	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-007A
Client Sample ID: Burnham Dam
Collection Date: 6/14/2010 1630h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1111h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT

(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

84115	p-Chlorotoluene	106-43-4	2.0	< 2.0	
	Isopropyltoluene	99-87-6	2.0	< 2.0	
	4-Methyl-2-pentanone	108-10-1	5.0	< 5.0	
	Acetone	67-64-1	10	< 10	
	Acetonitrile	75-05-8	5.0	< 5.0	
	Acrolein	107-02-8	5.0	< 5.0	
	Acrylonitrile	107-13-1	10	< 10	
	Allyl chloride	107-05-1	5.0	< 5.0	
	Benzene	71-43-2	2.0	< 2.0	
	Benzyl chloride	100-44-7	5.0	< 5.0	
	Bis(2-chloroisopropyl) ether	108-60-1	5.0	< 5.0	
	Bromobenzene	108-86-1	2.0	< 2.0	
	Bromochloromethane	74-97-5	2.0	< 2.0	
	Bromodichloromethane	75-27-4	2.0	< 2.0	
	Bromoform	75-25-2	2.0	< 2.0	
	Bromomethane	74-83-9	5.0	< 5.0	
	Butyl acetate	123-86-4	5.0	< 5.0	
	Carbon disulfide	75-15-0	2.0	< 2.0	
	Carbon tetrachloride	56-23-5	2.0	< 2.0	
	Chlorobenzene	108-90-7	2.0	< 2.0	
	Chloroethane	75-00-3	2.0	< 2.0	
	Chloroform	67-66-3	2.0	< 2.0	
	Chloromethane	74-87-3	5.0	< 5.0	
	2-Chloro-1,3-butadiene	126-99-8	2.0	< 2.0	
	cis-1,2-Dichloroethene	156-59-2	2.0	< 2.0	
	cis-1,3-Dichloropropene	10061-01-5	2.0	< 2.0	
	Cyclohexane	110-82-7	2.0	< 2.0	
	Cyclohexanone	108-94-1	50	< 50	
	Dibromochloromethane	124-48-1	2.0	< 2.0	

Report Date: 6/17/2010 Page 60 of 103



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-007A
Client Sample ID: Burnham Dam
Collection Date: 6/14/2010 1630h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1111h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	Dibromomethane	74-95-3	2.0	< 2.0	
	Dichlorodifluoromethane	75-71-8	2.0	< 2.0	
	Ethyl acetate	141-78-6	10	< 10	
	Ethyl ether	60-29-7	10	< 10	
(801) 263-8686	Ethyl methacrylate	97-63-2	2.0	< 2.0	
Toll Free (888) 263-8686	Ethylbenzene	100-41-4	2.0	< 2.0	
Fax (801)263-8687	Hexachlorobutadiene	87-68-3	2.0	< 2.0	
email: awal@awal-labs.com	Iodomethane	74-88-4	5.0	< 5.0	
	Isobutyl alcohol	78-83-1	100	< 100	
Kyle F. Gross	Isopropyl acetate	108-21-4	2.0	< 2.0	
Laboratory Director	Isopropyl alcohol	67-63-0	25	< 25	
	Isopropylbenzene	98-82-8	2.0	< 2.0	
Jose Rocha	Isopropyltoluene	99-87-6	2.0	< 2.0	
QA Officer	m,p-Xylene	179601-23-1	2.0	< 2.0	
	Methacrylonitrile	126-98-7	5.0	< 5.0	
	Methyl Acetate	79-20-9	5.0	< 5.0	
	Methyl methacrylate	80-62-6	5.0	< 5.0	
	Methyl tert-butyl ether	1634-04-4	2.0	< 2.0	
	Methylcyclohexane	108-87-2	2.0	< 2.0	
	Dichloromethane	75-09-2	2.0	< 2.0	
	n-Amyl acetate	628-63-7	2.0	< 2.0	
	n-Butyl alcohol	71-36-3	25	< 25	
	n-Butylbenzene	104-51-8	2.0	< 2.0	
	n-Hexane	110-54-3	2.0	< 2.0	
	n-Octane	111-65-9	2.0	< 2.0	
	n-Propylbenzene	103-65-1	2.0	< 2.0	
	Naphthalene	91-20-3	2.0	3.5	
	1,2-Dimethylbenzene	95-47-6	2.0	< 2.0	
	Pentachloroethane	76-01-7	2.0	< 2.0	

Report Date: 6/17/2010 Page 61 of 103



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-007A
Client Sample ID: Burnham Dam
Collection Date: 6/14/2010 1630h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1111h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	Propionitrile	107-12-0	25	< 25	
	Propyl acetate	109-60-4	2.0	< 2.0	
	sec-Butylbenzene	135-98-8	2.0	< 2.0	
	Styrene	100-42-5	2.0	< 2.0	
(801) 263-8686	tert-Butyl alcohol	76-65-0	20	< 20	
Toll Free (888) 263-8686	tert-Butylbenzene	98-06-6	2.0	< 2.0	
Fax (801)263-8687	Tetrachloroethene	127-18-4	2.0	< 2.0	
email: awal@awal-labs.com	Tetrahydrofuran	109-99-9	2.0	< 2.0	
	Toluene	108-88-3	2.0	< 2.0	
Kyle F. Gross	trans-1,2-Dichloroethene	156-60-5	2.0	< 2.0	
Laboratory Director	trans-1,3-Dichloropropene	10061-02-6	2.0	< 2.0	
	trans-1,4-Dichloro-2-butene	110-57-6	2.0	< 2.0	
	Trichlorethylene	79-01-6	2.0	< 2.0	
Jose Rocha	Trichlorofluoromethane	75-69-4	2.0	< 2.0	
QA Officer	Vinyl acetate	108-05-4	5.0	< 5.0	
	Vinyl chloride	75-01-4	1.0	< 1.0	
	Xylenes, Total	1330-20-7	2.0	< 2.0	
	TPH C6-C10 (GRO)		20	< 20	
	Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	102	
	Surr: 4-Bromofluorobenzene	460-00-4	80-123	100	
	Surr: Dibromofluoromethane	1868-53-7	80-124	101	
	Surr: Toluene-d8	2037-26-5	80-125	100	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-008A
Client Sample ID: Jordan R. @ Cudahy Lane
Collection Date: 6/14/2010 1710h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1130h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT
84115
(801) 263-8686
Toll Free (888) 263-8686
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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

1,1,1,2-Tetrachloroethane	630-20-6	2.0	< 2.0
1,1,1-Trichloroethane	71-55-6	2.0	< 2.0
1,1,2,2-Tetrachloroethane	79-34-5	2.0	< 2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.0	< 2.0
1,1,2-Trichloroethane	79-00-5	2.0	< 2.0
1,1-Dichloropropene	563-58-6	2.0	< 2.0
1,1-Dichloroethane	75-34-3	2.0	< 2.0
1,1-Dichloroethene	75-35-4	2.0	< 2.0
1,2,3-Trichlorobenzene	87-61-6	2.0	< 2.0
1,2,3-Trichloropropane	96-18-4	2.0	< 2.0
1,2,3-Trimethylbenzene	526-73-8	2.0	< 2.0
1,2,4-Trichlorobenzene	120-82-1	2.0	< 2.0
1,2,4-Trimethylbenzene	95-63-6	2.0	< 2.0
1,2-Dibromo-3-chloropropane	96-12-8	2.0	< 2.0
1,2-Dibromoethane	106-93-4	2.0	< 2.0
1,2-Dichlorobenzene	95-50-1	2.0	< 2.0
1,2-Dichloroethane	107-06-2	2.0	< 2.0
1,2-Dichloropropane	78-87-5	2.0	< 2.0
1,3,5-Trimethylbenzene	108-67-8	2.0	< 2.0
1,3-Dichlorobenzene	541-73-1	2.0	< 2.0
1,3-Dichloropropane	142-28-9	2.0	< 2.0
1,4-Dichlorobenzene	106-46-7	2.0	< 2.0
1,4-Dioxane	123-91-1	40	< 40
2,2-Dichloropropane	594-20-7	2.0	< 2.0
2-Butanone	78-93-3	10	< 10
2-Chloroethylvinylether	110-75-8	5.0	< 5.0
o-Chlorotoluene	95-49-8	2.0	< 2.0
2-Hexanone	591-78-6	5.0	< 5.0
2-Nitropropane	79-46-9	2.0	< 2.0



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-008A
Client Sample ID: Jordan R. @ Cudahy Lane
Collection Date: 6/14/2010 1710h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1130h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT

(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

84115	p-Chlorotoluene	106-43-4	2.0	< 2.0	
	Isopropyltoluene	99-87-6	2.0	< 2.0	
	4-Methyl-2-pentanone	108-10-1	5.0	< 5.0	
	Acetone	67-64-1	10	< 10	
(801) 263-8686	Acetonitrile	75-05-8	5.0	< 5.0	
Toll Free (888) 263-8686	Acrolein	107-02-8	5.0	< 5.0	
Fax (801)263-8687	Acrylonitrile	107-13-1	10	< 10	
email: awal@awal-labs.com	Allyl chloride	107-05-1	5.0	< 5.0	
	Benzene	71-43-2	2.0	< 2.0	
Kyle F. Gross	Benzyl chloride	100-44-7	5.0	< 5.0	
Laboratory Director	Bis(2-chloroisopropyl) ether	108-60-1	5.0	< 5.0	
	Bromobenzene	108-86-1	2.0	< 2.0	
Jose Rocha	Bromochloromethane	74-97-5	2.0	< 2.0	
QA Officer	Bromodichloromethane	75-27-4	2.0	< 2.0	
	Bromoform	75-25-2	2.0	< 2.0	
	Bromomethane	74-83-9	5.0	< 5.0	
	Butyl acetate	123-86-4	5.0	< 5.0	
	Carbon disulfide	75-15-0	2.0	< 2.0	
	Carbon tetrachloride	56-23-5	2.0	< 2.0	
	Chlorobenzene	108-90-7	2.0	< 2.0	
	Chloroethane	75-00-3	2.0	< 2.0	
	Chloroform	67-66-3	2.0	< 2.0	
	Chloromethane	74-87-3	5.0	< 5.0	
	2-Chloro-1,3-butadiene	126-99-8	2.0	< 2.0	
	cis-1,2-Dichloroethene	156-59-2	2.0	< 2.0	
	cis-1,3-Dichloropropene	10061-01-5	2.0	< 2.0	
	Cyclohexane	110-82-7	2.0	< 2.0	
	Cyclohexanone	108-94-1	50	< 50	
	Dibromochloromethane	124-48-1	2.0	< 2.0	

Report Date: 6/17/2010 Page 64 of 103



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-008A
Client Sample ID: Jordan R. @ Cudahy Lane
Collection Date: 6/14/2010 1710h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1130h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT
84115
(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

84115	Dibromomethane	74-95-3	2.0	< 2.0	
	Dichlorodifluoromethane	75-71-8	2.0	< 2.0	
	Ethyl acetate	141-78-6	10	< 10	
	Ethyl ether	60-29-7	10	< 10	
(801) 263-8686	Ethyl methacrylate	97-63-2	2.0	< 2.0	
Toll Free (888) 263-8686	Ethylbenzene	100-41-4	2.0	< 2.0	
Fax (801)263-8687	Hexachlorobutadiene	87-68-3	2.0	< 2.0	
email: awal@awal-labs.com	Iodomethane	74-88-4	5.0	< 5.0	
	Isobutyl alcohol	78-83-1	100	< 100	
Kyle F. Gross	Isopropyl acetate	108-21-4	2.0	< 2.0	
Laboratory Director	Isopropyl alcohol	67-63-0	25	< 25	
	Isopropylbenzene	98-82-8	2.0	< 2.0	
	Isopropyltoluene	99-87-6	2.0	< 2.0	
Jose Rocha	m,p-Xylene	179601-23-1	2.0	< 2.0	
QA Officer	Methacrylonitrile	126-98-7	5.0	< 5.0	
	Methyl Acetate	79-20-9	5.0	< 5.0	
	Methyl methacrylate	80-62-6	5.0	< 5.0	
	Methyl tert-butyl ether	1634-04-4	2.0	< 2.0	
	Methylcyclohexane	108-87-2	2.0	< 2.0	
	Dichloromethane	75-09-2	2.0	< 2.0	
	n-Amyl acetate	628-63-7	2.0	< 2.0	
	n-Butyl alcohol	71-36-3	25	< 25	
	n-Butylbenzene	104-51-8	2.0	< 2.0	
	n-Hexane	110-54-3	2.0	< 2.0	
	n-Octane	111-65-9	2.0	< 2.0	
	n-Propylbenzene	103-65-1	2.0	< 2.0	
	Naphthalene	91-20-3	2.0	2.9	
	1,2-Dimethylbenzene	95-47-6	2.0	< 2.0	
	Pentachloroethane	76-01-7	2.0	< 2.0	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-008A
Client Sample ID: Jordan R. @ Cudahy Lane
Collection Date: 6/14/2010 1710h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1130h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	Propionitrile	107-12-0	25	< 25	
	Propyl acetate	109-60-4	2.0	< 2.0	
	sec-Butylbenzene	135-98-8	2.0	< 2.0	
	Styrene	100-42-5	2.0	< 2.0	
(801) 263-8686	tert-Butyl alcohol	76-65-0	20	< 20	
Toll Free (888) 263-8686	tert-Butylbenzene	98-06-6	2.0	< 2.0	
Fax (801)263-8687	Tetrachloroethene	127-18-4	2.0	< 2.0	
email: awal@awal-labs.com	Tetrahydrofuran	109-99-9	2.0	< 2.0	
	Toluene	108-88-3	2.0	< 2.0	
Kyle F. Gross	trans-1,2-Dichloroethene	156-60-5	2.0	< 2.0	
Laboratory Director	trans-1,3-Dichloropropene	10061-02-6	2.0	< 2.0	
	trans-1,4-Dichloro-2-butene	110-57-6	2.0	< 2.0	
	Trichlorethylene	79-01-6	2.0	< 2.0	
Jose Rocha	Trichlorofluoromethane	75-69-4	2.0	< 2.0	
QA Officer	Vinyl acetate	108-05-4	5.0	< 5.0	
	Vinyl chloride	75-01-4	1.0	< 1.0	
	Xylenes, Total	1330-20-7	2.0	< 2.0	
	TPH C6-C10 (GRO)		20	< 20	
	Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	105	
	Surr: 4-Bromofluorobenzene	460-00-4	80-123	98.9	
	Surr: Dibromofluoromethane	1868-53-7	80-124	104	
	Surr: Toluene-d8	2037-26-5	80-125	99.7	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-009A
Client Sample ID: Jordan @ 1800 N.
Collection Date: 6/14/2010 1730h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1149h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT
84115
(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

1,1,1,2-Tetrachloroethane	630-20-6	2.0	< 2.0	
1,1,1-Trichloroethane	71-55-6	2.0	< 2.0	
1,1,2,2-Tetrachloroethane	79-34-5	2.0	< 2.0	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.0	< 2.0	
1,1,2-Trichloroethane	79-00-5	2.0	< 2.0	
1,1-Dichloropropene	563-58-6	2.0	< 2.0	
1,1-Dichloroethane	75-34-3	2.0	< 2.0	
1,1-Dichloroethene	75-35-4	2.0	< 2.0	
1,2,3-Trichlorobenzene	87-61-6	2.0	< 2.0	
1,2,3-Trichloropropane	96-18-4	2.0	< 2.0	
1,2,3-Trimethylbenzene	526-73-8	2.0	< 2.0	
1,2,4-Trichlorobenzene	120-82-1	2.0	< 2.0	
1,2,4-Trimethylbenzene	95-63-6	2.0	< 2.0	
1,2-Dibromo-3-chloropropane	96-12-8	2.0	< 2.0	
1,2-Dibromoethane	106-93-4	2.0	< 2.0	
1,2-Dichlorobenzene	95-50-1	2.0	< 2.0	
1,2-Dichloroethane	107-06-2	2.0	< 2.0	
1,2-Dichloropropane	78-87-5	2.0	< 2.0	
1,3,5-Trimethylbenzene	108-67-8	2.0	< 2.0	
1,3-Dichlorobenzene	541-73-1	2.0	< 2.0	
1,3-Dichloropropane	142-28-9	2.0	< 2.0	
1,4-Dichlorobenzene	106-46-7	2.0	< 2.0	
1,4-Dioxane	123-91-1	40	< 40	
2,2-Dichloropropane	594-20-7	2.0	< 2.0	
2-Butanone	78-93-3	10	< 10	
2-Chloroethylvinylether	110-75-8	5.0	< 5.0	
o-Chlorotoluene	95-49-8	2.0	< 2.0	
2-Hexanone	591-78-6	5.0	< 5.0	
2-Nitropropane	79-46-9	2.0	< 2.0	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-009A
Client Sample ID: Jordan @ 1800 N.
Collection Date: 6/14/2010 1730h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1149h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	p-Chlorotoluene	106-43-4	2.0	< 2.0	
	Isopropyltoluene	99-87-6	2.0	< 2.0	
	4-Methyl-2-pentanone	108-10-1	5.0	< 5.0	
	Acetone	67-64-1	10	< 10	
(801) 263-8686	Acetonitrile	75-05-8	5.0	< 5.0	
Toll Free (888) 263-8686	Acrolein	107-02-8	5.0	< 5.0	
Fax (801)263-8687	Acrylonitrile	107-13-1	10	< 10	
email: awal@awal-labs.com	Allyl chloride	107-05-1	5.0	< 5.0	
	Benzene	71-43-2	2.0	< 2.0	
Kyle F. Gross	Benzyl chloride	100-44-7	5.0	< 5.0	
Laboratory Director	Bis(2-chloroisopropyl) ether	108-60-1	5.0	< 5.0	
	Bromobenzene	108-86-1	2.0	< 2.0	
Jose Rocha	Bromochloromethane	74-97-5	2.0	< 2.0	
QA Officer	Bromodichloromethane	75-27-4	2.0	< 2.0	
	Bromoform	75-25-2	2.0	< 2.0	
	Bromomethane	74-83-9	5.0	< 5.0	
	Butyl acetate	123-86-4	5.0	< 5.0	
	Carbon disulfide	75-15-0	2.0	< 2.0	
	Carbon tetrachloride	56-23-5	2.0	< 2.0	
	Chlorobenzene	108-90-7	2.0	< 2.0	
	Chloroethane	75-00-3	2.0	< 2.0	
	Chloroform	67-66-3	2.0	< 2.0	
	Chloromethane	74-87-3	5.0	< 5.0	
	2-Chloro-1,3-butadiene	126-99-8	2.0	< 2.0	
	cis-1,2-Dichloroethene	156-59-2	2.0	< 2.0	
	cis-1,3-Dichloropropene	10061-01-5	2.0	< 2.0	
	Cyclohexane	110-82-7	2.0	< 2.0	
	Cyclohexanone	108-94-1	50	< 50	
	Dibromochloromethane	124-48-1	2.0	< 2.0	

Report Date: 6/17/2010 Page 68 of 103



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-009A
Client Sample ID: Jordan @ 1800 N.
Collection Date: 6/14/2010 1730h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1149h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	Dibromomethane	74-95-3	2.0	< 2.0	
	Dichlorodifluoromethane	75-71-8	2.0	< 2.0	
	Ethyl acetate	141-78-6	10	< 10	
	Ethyl ether	60-29-7	10	< 10	
(801) 263-8686	Ethyl methacrylate	97-63-2	2.0	< 2.0	
Toll Free (888) 263-8686	Ethylbenzene	100-41-4	2.0	< 2.0	
Fax (801)263-8687	Hexachlorobutadiene	87-68-3	2.0	< 2.0	
email: awal@awal-labs.com	Iodomethane	74-88-4	5.0	< 5.0	
	Isobutyl alcohol	78-83-1	100	< 100	
Kyle F. Gross	Isopropyl acetate	108-21-4	2.0	< 2.0	
Laboratory Director	Isopropyl alcohol	67-63-0	25	< 25	
	Isopropylbenzene	98-82-8	2.0	< 2.0	
Jose Rocha	Isopropyltoluene	99-87-6	2.0	< 2.0	
QA Officer	m,p-Xylene	179601-23-1	2.0	< 2.0	
	Methacrylonitrile	126-98-7	5.0	< 5.0	
	Methyl Acetate	79-20-9	5.0	< 5.0	
	Methyl methacrylate	80-62-6	5.0	< 5.0	
	Methyl tert-butyl ether	1634-04-4	2.0	< 2.0	
	Methylcyclohexane	108-87-2	2.0	< 2.0	
	Dichloromethane	75-09-2	2.0	< 2.0	
	n-Amyl acetate	628-63-7	2.0	< 2.0	
	n-Butyl alcohol	71-36-3	25	< 25	
	n-Butylbenzene	104-51-8	2.0	< 2.0	
	n-Hexane	110-54-3	2.0	< 2.0	
	n-Octane	111-65-9	2.0	< 2.0	
	n-Propylbenzene	103-65-1	2.0	< 2.0	
	Naphthalene	91-20-3	2.0	2.7	
	1,2-Dimethylbenzene	95-47-6	2.0	< 2.0	
	Pentachloroethane	76-01-7	2.0	< 2.0	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-009A
Client Sample ID: Jordan @ 1800 N.
Collection Date: 6/14/2010 1730h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1149h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT
84115
(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

84115	Propionitrile	107-12-0	25	< 25	
	Propyl acetate	109-60-4	2.0	< 2.0	
	sec-Butylbenzene	135-98-8	2.0	< 2.0	
	Styrene	100-42-5	2.0	< 2.0	
(801) 263-8686	tert-Butyl alcohol	76-65-0	20	< 20	
Toll Free (888) 263-8686	tert-Butylbenzene	98-06-6	2.0	< 2.0	
Fax (801)263-8687	Tetrachloroethene	127-18-4	2.0	< 2.0	
email: awal@awal-labs.com	Tetrahydrofuran	109-99-9	2.0	< 2.0	
	Toluene	108-88-3	2.0	< 2.0	
	trans-1,2-Dichloroethene	156-60-5	2.0	< 2.0	
	trans-1,3-Dichloropropene	10061-02-6	2.0	< 2.0	
	trans-1,4-Dichloro-2-butene	110-57-6	2.0	< 2.0	
	Trichlorethylene	79-01-6	2.0	< 2.0	
	Trichlorofluoromethane	75-69-4	2.0	< 2.0	
	Vinyl acetate	108-05-4	5.0	< 5.0	
	Vinyl chloride	75-01-4	1.0	< 1.0	
	Xylenes, Total	1330-20-7	2.0	< 2.0	
	TPH C6-C10 (GRO)		20	< 20	
	Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	106	
	Surr: 4-Bromofluorobenzene	460-00-4	80-123	101	
	Surr: Dibromofluoromethane	1868-53-7	80-124	104	
	Surr: Toluene-d8	2037-26-5	80-125	101	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-010A
Client Sample ID: Jordan @ 300 N.
Collection Date: 6/14/2010 1750h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1208h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
84115 1,1,1,2-Tetrachloroethane	630-20-6	2.0	< 2.0	
1,1,1-Trichloroethane	71-55-6	2.0	< 2.0	
1,1,2,2-Tetrachloroethane	79-34-5	2.0	< 2.0	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.0	< 2.0	
(801) 263-8686 1,1,2-Trichloroethane	79-00-5	2.0	< 2.0	
Toll Free (888) 263-8686 1,1-Dichloropropene	563-58-6	2.0	< 2.0	
Fax (801)263-8687 1,1-Dichloroethane	75-34-3	2.0	< 2.0	
email: awal@awal-labs.com 1,1-Dichloroethene	75-35-4	2.0	< 2.0	
1,2,3-Trichlorobenzene	87-61-6	2.0	< 2.0	
Kyle F. Gross 1,2,3-Trichloropropane	96-18-4	2.0	< 2.0	
Laboratory Director 1,2,3-Trimethylbenzene	526-73-8	2.0	< 2.0	
1,2,4-Trichlorobenzene	120-82-1	2.0	< 2.0	
Jose Rocha 1,2,4-Trimethylbenzene	95-63-6	2.0	< 2.0	
QA Officer 1,2-Dibromo-3-chloropropane	96-12-8	2.0	< 2.0	
1,2-Dibromoethane	106-93-4	2.0	< 2.0	
1,2-Dichlorobenzene	95-50-1	2.0	< 2.0	
1,2-Dichloroethane	107-06-2	2.0	< 2.0	
1,2-Dichloropropane	78-87-5	2.0	< 2.0	
1,3,5-Trimethylbenzene	108-67-8	2.0	< 2.0	
1,3-Dichlorobenzene	541-73-1	2.0	< 2.0	
1,3-Dichloropropane	142-28-9	2.0	< 2.0	
1,4-Dichlorobenzene	106-46-7	2.0	< 2.0	
1,4-Dioxane	123-91-1	40	< 40	
2,2-Dichloropropane	594-20-7	2.0	< 2.0	
2-Butanone	78-93-3	10	< 10	
2-Chloroethylvinylether	110-75-8	5.0	< 5.0	
o-Chlorotoluene	95-49-8	2.0	< 2.0	
2-Hexanone	591-78-6	5.0	< 5.0	
2-Nitropropane	79-46-9	2.0	< 2.0	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-010A
Client Sample ID: Jordan @ 300 N.
Collection Date: 6/14/2010 1750h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1208h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	p-Chlorotoluene	106-43-4	2.0	< 2.0
	Isopropyltoluene	99-87-6	2.0	< 2.0
	4-Methyl-2-pentanone	108-10-1	5.0	< 5.0
	Acetone	67-64-1	10	< 10
(801) 263-8686	Acetonitrile	75-05-8	5.0	< 5.0
Toll Free (888) 263-8686	Acrolein	107-02-8	5.0	< 5.0
Fax (801)263-8687	Acrylonitrile	107-13-1	10	< 10
email: awal@awal-labs.com	Allyl chloride	107-05-1	5.0	< 5.0
	Benzene	71-43-2	2.0	< 2.0
Kyle F. Gross	Benzyl chloride	100-44-7	5.0	< 5.0
Laboratory Director	Bis(2-chloroisopropyl) ether	108-60-1	5.0	< 5.0
	Bromobenzene	108-86-1	2.0	< 2.0
Jose Rocha	Bromochloromethane	74-97-5	2.0	< 2.0
QA Officer	Bromodichloromethane	75-27-4	2.0	< 2.0
	Bromoform	75-25-2	2.0	< 2.0
	Bromomethane	74-83-9	5.0	< 5.0
	Butyl acetate	123-86-4	5.0	< 5.0
	Carbon disulfide	75-15-0	2.0	< 2.0
	Carbon tetrachloride	56-23-5	2.0	< 2.0
	Chlorobenzene	108-90-7	2.0	< 2.0
	Chloroethane	75-00-3	2.0	< 2.0
	Chloroform	67-66-3	2.0	< 2.0
	Chloromethane	74-87-3	5.0	< 5.0
	2-Chloro-1,3-butadiene	126-99-8	2.0	< 2.0
	cis-1,2-Dichloroethene	156-59-2	2.0	< 2.0
	cis-1,3-Dichloropropene	10061-01-5	2.0	< 2.0
	Cyclohexane	110-82-7	2.0	< 2.0
	Cyclohexanone	108-94-1	50	< 50
	Dibromochloromethane	124-48-1	2.0	< 2.0

Report Date: 6/17/2010 Page 72 of 103



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-010A
Client Sample ID: Jordan @ 300 N.
Collection Date: 6/14/2010 1750h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1208h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT
84115
(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

84115	Dibromomethane	74-95-3	2.0	< 2.0	
	Dichlorodifluoromethane	75-71-8	2.0	< 2.0	
	Ethyl acetate	141-78-6	10	< 10	
	Ethyl ether	60-29-7	10	< 10	
(801) 263-8686	Ethyl methacrylate	97-63-2	2.0	< 2.0	
Toll Free (888) 263-8686	Ethylbenzene	100-41-4	2.0	< 2.0	
Fax (801)263-8687	Hexachlorobutadiene	87-68-3	2.0	< 2.0	
email: awal@awal-labs.com	Iodomethane	74-88-4	5.0	< 5.0	
	Isobutyl alcohol	78-83-1	100	< 100	
Kyle F. Gross	Isopropyl acetate	108-21-4	2.0	< 2.0	
Laboratory Director	Isopropyl alcohol	67-63-0	25	< 25	
	Isopropylbenzene	98-82-8	2.0	< 2.0	
	Isopropyltoluene	99-87-6	2.0	< 2.0	
Jose Rocha	m,p-Xylene	179601-23-1	2.0	< 2.0	
QA Officer	Methacrylonitrile	126-98-7	5.0	< 5.0	
	Methyl Acetate	79-20-9	5.0	< 5.0	
	Methyl methacrylate	80-62-6	5.0	< 5.0	
	Methyl tert-butyl ether	1634-04-4	2.0	< 2.0	
	Methylcyclohexane	108-87-2	2.0	< 2.0	
	Dichloromethane	75-09-2	2.0	< 2.0	
	n-Amyl acetate	628-63-7	2.0	< 2.0	
	n-Butyl alcohol	71-36-3	25	< 25	
	n-Butylbenzene	104-51-8	2.0	< 2.0	
	n-Hexane	110-54-3	2.0	< 2.0	
	n-Octane	111-65-9	2.0	< 2.0	
	n-Propylbenzene	103-65-1	2.0	< 2.0	
	Naphthalene	91-20-3	2.0	2.6	
	1,2-Dimethylbenzene	95-47-6	2.0	< 2.0	
	Pentachloroethane	76-01-7	2.0	< 2.0	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-010A
Client Sample ID: Jordan @ 300 N.
Collection Date: 6/14/2010 1750h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1208h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	Propionitrile	107-12-0	25	< 25	
	Propyl acetate	109-60-4	2.0	< 2.0	
	sec-Butylbenzene	135-98-8	2.0	< 2.0	
	Styrene	100-42-5	2.0	< 2.0	
(801) 263-8686	tert-Butyl alcohol	76-65-0	20	< 20	
Toll Free (888) 263-8686	tert-Butylbenzene	98-06-6	2.0	< 2.0	
Fax (801)263-8687	Tetrachloroethene	127-18-4	2.0	< 2.0	
email: awal@awal-labs.com	Tetrahydrofuran	109-99-9	2.0	< 2.0	
	Toluene	108-88-3	2.0	< 2.0	
Kyle F. Gross	trans-1,2-Dichloroethene	156-60-5	2.0	< 2.0	
Laboratory Director	trans-1,3-Dichloropropene	10061-02-6	2.0	< 2.0	
	trans-1,4-Dichloro-2-butene	110-57-6	2.0	< 2.0	
	Trichlorethylene	79-01-6	2.0	< 2.0	
Jose Rocha	Trichlorofluoromethane	75-69-4	2.0	< 2.0	
QA Officer	Vinyl acetate	108-05-4	5.0	< 5.0	
	Vinyl chloride	75-01-4	1.0	< 1.0	
	Xylenes, Total	1330-20-7	2.0	< 2.0	
	TPH C6-C10 (GRO)		20	< 20	
	Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	103	
	Surr: 4-Bromofluorobenzene	460-00-4	80-123	101	
	Surr: Dibromofluoromethane	1868-53-7	80-124	101	
	Surr: Toluene-d8	2037-26-5	80-125	99.9	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-011A
Client Sample ID: Jordan @ 1700 S.
Collection Date: 6/14/2010 1820h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1227h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

463 West 3600 South
Salt Lake City, UT
84115
(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

1,1,1,2-Tetrachloroethane	630-20-6	2.0	< 2.0	
1,1,1-Trichloroethane	71-55-6	2.0	< 2.0	
1,1,2,2-Tetrachloroethane	79-34-5	2.0	< 2.0	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.0	< 2.0	
1,1,2-Trichloroethane	79-00-5	2.0	< 2.0	
1,1-Dichloropropene	563-58-6	2.0	< 2.0	
1,1-Dichloroethane	75-34-3	2.0	< 2.0	
1,1-Dichloroethene	75-35-4	2.0	< 2.0	
1,2,3-Trichlorobenzene	87-61-6	2.0	< 2.0	
1,2,3-Trichloropropane	96-18-4	2.0	< 2.0	
1,2,3-Trimethylbenzene	526-73-8	2.0	< 2.0	
1,2,4-Trichlorobenzene	120-82-1	2.0	< 2.0	
1,2,4-Trimethylbenzene	95-63-6	2.0	< 2.0	
1,2-Dibromo-3-chloropropane	96-12-8	2.0	< 2.0	
1,2-Dibromoethane	106-93-4	2.0	< 2.0	
1,2-Dichlorobenzene	95-50-1	2.0	< 2.0	
1,2-Dichloroethane	107-06-2	2.0	< 2.0	
1,2-Dichloropropane	78-87-5	2.0	< 2.0	
1,3,5-Trimethylbenzene	108-67-8	2.0	< 2.0	
1,3-Dichlorobenzene	541-73-1	2.0	< 2.0	
1,3-Dichloropropane	142-28-9	2.0	< 2.0	
1,4-Dichlorobenzene	106-46-7	2.0	< 2.0	
1,4-Dioxane	123-91-1	40	< 40	
2,2-Dichloropropane	594-20-7	2.0	< 2.0	
2-Butanone	78-93-3	10	< 10	
2-Chloroethylvinylether	110-75-8	5.0	< 5.0	
o-Chlorotoluene	95-49-8	2.0	< 2.0	
2-Hexanone	591-78-6	5.0	< 5.0	
2-Nitropropane	79-46-9	2.0	< 2.0	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-011A
Client Sample ID: Jordan @ 1700 S.
Collection Date: 6/14/2010 1820h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1227h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	p-Chlorotoluene	106-43-4	2.0	< 2.0	
	Isopropyltoluene	99-87-6	2.0	< 2.0	
	4-Methyl-2-pentanone	108-10-1	5.0	< 5.0	
	Acetone	67-64-1	10	< 10	
(801) 263-8686	Acetonitrile	75-05-8	5.0	< 5.0	
Toll Free (888) 263-8686	Acrolein	107-02-8	5.0	< 5.0	
Fax (801)263-8687	Acrylonitrile	107-13-1	10	< 10	
email: awal@awal-labs.com	Allyl chloride	107-05-1	5.0	< 5.0	
	Benzene	71-43-2	2.0	< 2.0	
Kyle F. Gross	Benzyl chloride	100-44-7	5.0	< 5.0	
Laboratory Director	Bis(2-chloroisopropyl) ether	108-60-1	5.0	< 5.0	
	Bromobenzene	108-86-1	2.0	< 2.0	
Jose Rocha	Bromochloromethane	74-97-5	2.0	< 2.0	
QA Officer	Bromodichloromethane	75-27-4	2.0	< 2.0	
	Bromoform	75-25-2	2.0	< 2.0	
	Bromomethane	74-83-9	5.0	< 5.0	
	Butyl acetate	123-86-4	5.0	< 5.0	
	Carbon disulfide	75-15-0	2.0	< 2.0	
	Carbon tetrachloride	56-23-5	2.0	< 2.0	
	Chlorobenzene	108-90-7	2.0	< 2.0	
	Chloroethane	75-00-3	2.0	< 2.0	
	Chloroform	67-66-3	2.0	< 2.0	
	Chloromethane	74-87-3	5.0	< 5.0	
	2-Chloro-1,3-butadiene	126-99-8	2.0	< 2.0	
	cis-1,2-Dichloroethene	156-59-2	2.0	< 2.0	
	cis-1,3-Dichloropropene	10061-01-5	2.0	< 2.0	
	Cyclohexane	110-82-7	2.0	< 2.0	
	Cyclohexanone	108-94-1	50	< 50	
	Dibromochloromethane	124-48-1	2.0	< 2.0	

Report Date: 6/17/2010 Page 76 of 103



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-011A
Client Sample ID: Jordan @ 1700 S.
Collection Date: 6/14/2010 1820h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1227h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	Dibromomethane	74-95-3	2.0	< 2.0	
	Dichlorodifluoromethane	75-71-8	2.0	< 2.0	
	Ethyl acetate	141-78-6	10	< 10	
	Ethyl ether	60-29-7	10	< 10	
(801) 263-8686	Ethyl methacrylate	97-63-2	2.0	< 2.0	
Toll Free (888) 263-8686	Ethylbenzene	100-41-4	2.0	< 2.0	
Fax (801)263-8687	Hexachlorobutadiene	87-68-3	2.0	< 2.0	
email: awal@awal-labs.com	Iodomethane	74-88-4	5.0	< 5.0	
	Isobutyl alcohol	78-83-1	100	< 100	
Kyle F. Gross	Isopropyl acetate	108-21-4	2.0	< 2.0	
Laboratory Director	Isopropyl alcohol	67-63-0	25	< 25	
	Isopropylbenzene	98-82-8	2.0	< 2.0	
Jose Rocha	Isopropyltoluene	99-87-6	2.0	< 2.0	
QA Officer	m,p-Xylene	179601-23-1	2.0	< 2.0	
	Methacrylonitrile	126-98-7	5.0	< 5.0	
	Methyl Acetate	79-20-9	5.0	< 5.0	
	Methyl methacrylate	80-62-6	5.0	< 5.0	
	Methyl tert-butyl ether	1634-04-4	2.0	< 2.0	
	Methylcyclohexane	108-87-2	2.0	< 2.0	
	Dichloromethane	75-09-2	2.0	< 2.0	
	n-Amyl acetate	628-63-7	2.0	< 2.0	
	n-Butyl alcohol	71-36-3	25	< 25	
	n-Butylbenzene	104-51-8	2.0	< 2.0	
	n-Hexane	110-54-3	2.0	< 2.0	
	n-Octane	111-65-9	2.0	< 2.0	
	n-Propylbenzene	103-65-1	2.0	< 2.0	
	Naphthalene	91-20-3	2.0	< 2.0	
	1,2-Dimethylbenzene	95-47-6	2.0	< 2.0	
	Pentachloroethane	76-01-7	2.0	< 2.0	



ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Utah DEQ DERR
Project: Red Butte Oil Spill
Lab Sample ID: 1006246-011A
Client Sample ID: Jordan @ 1700 S.
Collection Date: 6/14/2010 1820h
Received Date: 6/14/2010 1950h
Method Used: EPA624

Contact: Jim Harris

Analyzed: 6/15/2010 1227h

Analytical Results

VOAs PP List by GC/MS Method 624

Units: µg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

84115	Propionitrile	107-12-0	25	< 25	
	Propyl acetate	109-60-4	2.0	< 2.0	
	sec-Butylbenzene	135-98-8	2.0	< 2.0	
	Styrene	100-42-5	2.0	< 2.0	
(801) 263-8686	tert-Butyl alcohol	76-65-0	20	< 20	
Toll Free (888) 263-8686	tert-Butylbenzene	98-06-6	2.0	< 2.0	
Fax (801)263-8687	Tetrachloroethene	127-18-4	2.0	< 2.0	
email: awal@awal-labs.com	Tetrahydrofuran	109-99-9	2.0	< 2.0	
	Toluene	108-88-3	2.0	< 2.0	
Kyle F. Gross	trans-1,2-Dichloroethene	156-60-5	2.0	< 2.0	
Laboratory Director	trans-1,3-Dichloropropene	10061-02-6	2.0	< 2.0	
	trans-1,4-Dichloro-2-butene	110-57-6	2.0	< 2.0	
	Trichlorethylene	79-01-6	2.0	< 2.0	
Jose Rocha	Trichlorofluoromethane	75-69-4	2.0	< 2.0	
QA Officer	Vinyl acetate	108-05-4	5.0	< 5.0	
	Vinyl chloride	75-01-4	1.0	< 1.0	
	Xylenes, Total	1330-20-7	2.0	< 2.0	
	TPH C6-C10 (GRO)		20	< 20	
	Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	105	
	Surr: 4-Bromofluorobenzene	460-00-4	80-123	105	
	Surr: Dibromofluoromethane	1868-53-7	80-124	103	
	Surr: Toluene-d8	2037-26-5	80-125	102	



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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: GC

QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
LCS-7027	Diesel Range Organics C10-C28	mg/L	SW8015D	67	66.67	0	100	83-158				6/16/2010
LCS-7027	Surr: 4-Bromofluorobenzene	% REC	SW8015D	13	26.67		49.0	20-80				6/16/2010



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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: GC

QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
MB-7027	Diesel Range Organics C10-C28	mg/L	SW8015D	< 8.0				-				6/16/2010
MB-7027	Surr: 4-Bromofluorobenzene	% REC	SW8015D	13	26.67		47.2	32-76				6/16/2010



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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: GC

QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
1006246-007DMS	Diesel Range Organics C10-C28	mg/L	SW8015D	74	66.67	0	111	59-152				6/17/2010
1006246-007DMS	Surr: 4-Bromofluorobenzene	% REC	SW8015D	14	26.67		53.7	36-79				6/17/2010



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Kyle F. Gross

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Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: GC

QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
1006246-007DMSD	Diesel Range Organics C10-C28	mg/L	SW8015D	75	66.67	0	112	59-152	0.897	25		6/17/2010
1006246-007DMSD	Surr: 4-Bromofluorobenzene	% REC	SW8015D	14	26.67		53.7	36-79				6/17/2010



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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: ME

QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
LCS-7039	Chromium	mg/L	E200.7	0.20	0.2000	0	102	85-115				6/15/2010
LCS-7040	Arsenic	mg/L	E200.8	0.20	0.2000	0	101	85-115				6/15/2010
LCS-7040	Barium	mg/L	E200.8	0.20	0.2000	0	98.2	85-115				6/15/2010
LCS-7040	Cadmium	mg/L	E200.8	0.20	0.2000	0	100	85-115				6/15/2010
LCS-7040	Lead	mg/L	E200.8	0.20	0.2000	0	102	85-115				6/15/2010
LCS-7040	Selenium	mg/L	E200.8	0.20	0.2000	0	98.5	85-115				6/15/2010
LCS-7040	Silver	mg/L	E200.8	0.20	0.2000	0	99.4	85-115				6/15/2010
LCS-7046	Mercury	mg/L	E245.1	0.0035	0.003330	0	104	85-115				6/16/2010



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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: ME

QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
MB-7039	Chromium	mg/L	E200.7	< 0.010				-				6/15/2010
MB-7040	Arsenic	mg/L	E200.8	< 0.00060				-				6/15/2010
MB-7040	Barium	mg/L	E200.8	< 0.00040				-				6/15/2010
MB-7040	Cadmium	mg/L	E200.8	< 0.00018				-				6/15/2010
MB-7040	Lead	mg/L	E200.8	< 0.00040				-				6/15/2010
MB-7040	Selenium	mg/L	E200.8	< 0.00080				-				6/15/2010
MB-7040	Silver	mg/L	E200.8	< 0.00040				-				6/15/2010
MB-7046	Mercury	mg/L	E245.1	< 0.00020				-				6/16/2010



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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: ME

QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
1006246-001CMS	Chromium	mg/L	E200.7	0.20	0.2000	0.001670	100	70-130				6/15/2010
1006246-011CMS	Chromium	mg/L	E200.7	0.20	0.2000	0.003020	97.0	70-130				6/15/2010
1006246-001CMS	Arsenic	mg/L	E200.8	0.21	0.2000	0.001094	102	70-130				6/15/2010
1006246-001CMS	Barium	mg/L	E200.8	0.26	0.2000	0.06044	97.8	70-130				6/15/2010
1006246-001CMS	Cadmium	mg/L	E200.8	0.20	0.2000	0.00005700	99.6	70-130				6/15/2010
1006246-001CMS	Lead	mg/L	E200.8	0.20	0.2000	0.002594	99.3	70-130				6/15/2010
1006246-001CMS	Selenium	mg/L	E200.8	0.20	0.2000	0.0007000	99.5	70-130				6/15/2010
1006246-001CMS	Silver	mg/L	E200.8	0.20	0.2000	0	98.5	70-130				6/15/2010
1006246-011CMS	Arsenic	mg/L	E200.8	0.21	0.2000	0.006983	100	70-130				6/15/2010
1006246-011CMS	Barium	mg/L	E200.8	0.26	0.2000	0.05620	99.7	70-130				6/15/2010
1006246-011CMS	Cadmium	mg/L	E200.8	0.20	0.2000	0.0001570	99.6	70-130				6/15/2010
1006246-011CMS	Lead	mg/L	E200.8	0.22	0.2000	0.01230	103	70-130				6/15/2010
1006246-011CMS	Selenium	mg/L	E200.8	0.19	0.2000	0.0008310	96.8	70-130				6/15/2010
1006246-011CMS	Silver	mg/L	E200.8	0.20	0.2000	0.00004200	98.9	70-130				6/15/2010
1006246-002CMS	Mercury	mg/L	E245.1	0.0035	0.003330	0	105	80-120				6/16/2010

Report Date: 6/17/2010 Page 85 of 103



AMERICAN WEST ANALYTICAL LABORATORIES

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: ME

QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
1006246-001CMSD	Chromium	mg/L	E200.7	0.20	0.2000	0.001670	102	70-130	1.47	20		6/15/2010
1006246-011CMSD	Chromium	mg/L	E200.7	0.20	0.2000	0.003020	98.5	70-130	1.51	20		6/15/2010
1006246-001CMSD	Arsenic	mg/L	E200.8	0.21	0.2000	0.001094	104	70-130	1.26	20		6/15/2010
1006246-001CMSD	Barium	mg/L	E200.8	0.26	0.2000	0.06044	99.6	70-130	1.32	20		6/15/2010
1006246-001CMSD	Cadmium	mg/L	E200.8	0.20	0.2000	0.00005700	99.9	70-130	0.281	20		6/15/2010
1006246-001CMSD	Lead	mg/L	E200.8	0.20	0.2000	0.002594	100	70-130	1.14	20		6/15/2010
1006246-001CMSD	Selenium	mg/L	E200.8	0.20	0.2000	0.0007000	99.8	70-130	0.299	20		6/15/2010
1006246-001CMSD	Silver	mg/L	E200.8	0.20	0.2000	0	99.5	70-130	1.04	20		6/15/2010
1006246-011CMSD	Arsenic	mg/L	E200.8	0.21	0.2000	0.006983	99.2	70-130	0.865	20		6/15/2010
1006246-011CMSD	Barium	mg/L	E200.8	0.25	0.2000	0.05620	98.0	70-130	1.33	20		6/15/2010
1006246-011CMSD	Cadmium	mg/L	E200.8	0.20	0.2000	0.0001570	98.8	70-130	0.830	20		6/15/2010
1006246-011CMSD	Lead	mg/L	E200.8	0.22	0.2000	0.01230	102	70-130	0.614	20		6/15/2010
1006246-011CMSD	Selenium	mg/L	E200.8	0.19	0.2000	0.0008310	97.0	70-130	0.261	20		6/15/2010
1006246-011CMSD	Silver	mg/L	E200.8	0.20	0.2000	0.00004200	97.5	70-130	1.44	20		6/15/2010
1006246-002CMSD	Mercury	mg/L	E245.1	0.0034	0.003330	0	102	80-120	2.81	20		6/16/2010



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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: MSVOA

QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
LCS VOC 061510A	1,1,1,2-Tetrachloroethane	µg/L	EPA624	19	20.00	0	96.8	74-117				6/15/2010
LCS VOC 061510A	1,1,1-Trichloroethane	µg/L	EPA624	19	20.00	0	97.2	73-135				6/15/2010
LCS VOC 061510A	1,1,2,2-Tetrachloroethane	µg/L	EPA624	19	20.00	0	94.3	67-119				6/15/2010
LCS VOC 061510A	1,1,2-Trichloro-1,2,2-trifluoroetha	µg/L	EPA624	20	20.00	0	99.7	21-206				6/15/2010
LCS VOC 061510A	1,1,2-Trichloroethane	µg/L	EPA624	19	20.00	0	96.4	66.5-130				6/15/2010
LCS VOC 061510A	1,1-Dichloro-1-propene	µg/L	EPA624	39	40.00	0	98.5	10-140				6/15/2010
LCS VOC 061510A	1,1-Dichloroethane	µg/L	EPA624	19	20.00	0	95.8	70-130				6/15/2010
LCS VOC 061510A	1,1-Dichloroethene	µg/L	EPA624	19	20.00	0	92.6	52-171				6/15/2010
LCS VOC 061510A	1,2,3-Trichlorobenzene	µg/L	EPA624	21	20.00	0	105	12.1-169				6/15/2010
LCS VOC 061510A	1,2,3-Trichloropropane	µg/L	EPA624	17	20.00	0	86.7	62-116				6/15/2010
LCS VOC 061510A	1,2,3-Trimethylbenzene	µg/L	EPA624	21	20.00	0	103	76-140				6/15/2010
LCS VOC 061510A	1,2,4-Trichlorobenzene	µg/L	EPA624	18	20.00	0	92.4	58-133				6/15/2010
LCS VOC 061510A	1,2,4-Trimethylbenzene	µg/L	EPA624	20	20.00	0	97.6	79-151				6/15/2010
LCS VOC 061510A	1,2-Dibromo-3-chloropropane	µg/L	EPA624	17	20.00	0	87.4	64-129				6/15/2010
LCS VOC 061510A	1,2-Dibromoethane	µg/L	EPA624	19	20.00	0	95.8	70-126				6/15/2010
LCS VOC 061510A	1,2-Dichlorobenzene	µg/L	EPA624	20	20.00	0	102	67-135				6/15/2010
LCS VOC 061510A	1,2-Dichloroethane	µg/L	EPA624	19	20.00	0	95.4	60-137				6/15/2010
LCS VOC 061510A	1,2-Dichloropropane	µg/L	EPA624	19	20.00	0	96.5	59-135				6/15/2010
LCS VOC 061510A	1,3,5-Trimethylbenzene	µg/L	EPA624	20	20.00	0	98.4	77-151				6/15/2010
LCS VOC 061510A	1,3-Dichlorobenzene	µg/L	EPA624	19	20.00	0	96.8	78-134				6/15/2010
LCS VOC 061510A	1,3-Dichloropropane	µg/L	EPA624	19	20.00	0	94.5	78-116				6/15/2010
LCS VOC 061510A	1,4-Dichlorobenzene	µg/L	EPA624	19	20.00	0	97.0	72-139				6/15/2010
LCS VOC 061510A	1,4-Dioxane	µg/L	EPA624	200	200.0	0	101	33-149				6/15/2010
LCS VOC 061510A	2,2-Dichloropropane	µg/L	EPA624	13	30.00	0	43.2	13-180				6/15/2010

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: MSVOA

QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
LCS VOC 061510A	2-Butanone	µg/L	EPA624	26	20.00	0	131	10-217				6/15/2010
LCS VOC 061510A	2-Chloroethyl vinyl ether	µg/L	EPA624	41	40.00	0	102	32-163				6/15/2010
LCS VOC 061510A	2-Chlorotoluene	µg/L	EPA624	20	20.00	0	98.2	79-142				6/15/2010
LCS VOC 061510A	2-Hexanone	µg/L	EPA624	18	20.00	0	91.1	50-156				6/15/2010
LCS VOC 061510A	2-Nitropropane	µg/L	EPA624	18	20.00	0	90.7	10-243				6/15/2010
LCS VOC 061510A	4-Chlorotoluene	µg/L	EPA624	20	20.00	0	97.6	68-128				6/15/2010
LCS VOC 061510A	4-Isopropyltoluene	µg/L	EPA624	19	20.00	0	93.4	73-156				6/15/2010
LCS VOC 061510A	4-Methyl-2-pentanone	µg/L	EPA624	18	20.00	0	88.6	10-214				6/15/2010
LCS VOC 061510A	Acetone	µg/L	EPA624	22	20.00	0	108	10-313				6/15/2010
LCS VOC 061510A	Acetonitrile	µg/L	EPA624	37	40.00	0	92.6	37-159				6/15/2010
LCS VOC 061510A	Acrolein	µg/L	EPA624	34	40.00	0	84.7	10-325				6/15/2010
LCS VOC 061510A	Acrylonitrile	µg/L	EPA624	17	20.00	0	86.0	53-134				6/15/2010
LCS VOC 061510A	Allyl chloride	µg/L	EPA624	16	20.00	0	78.6	10-243				6/15/2010
LCS VOC 061510A	Benzene	µg/L	EPA624	20	20.00	0	98.2	69-126				6/15/2010
LCS VOC 061510A	Benzyl chloride	µg/L	EPA624	9.6	20.00	0	48.0	40-146				6/15/2010
LCS VOC 061510A	Bis(2-chloroisopropyl) ether	µg/L	EPA624	17	20.00	0	85.8	54-146				6/15/2010
LCS VOC 061510A	Bromobenzene	µg/L	EPA624	19	20.00	0	93.0	78-148				6/15/2010
LCS VOC 061510A	Bromochloromethane	µg/L	EPA624	19	20.00	0	96.0	75-134				6/15/2010
LCS VOC 061510A	Bromodichloromethane	µg/L	EPA624	19	20.00	0	94.6	74-121				6/15/2010
LCS VOC 061510A	Bromoform	µg/L	EPA624	19	20.00	0	95.2	48-131				6/15/2010
LCS VOC 061510A	Bromomethane	µg/L	EPA624	15	20.00	0	74.0	10-185				6/15/2010
LCS VOC 061510A	Butyl acetate	µg/L	EPA624	16	20.00	0	79.2	46-178				6/15/2010
LCS VOC 061510A	Carbon disulfide	µg/L	EPA624	18	20.00	0	87.7	21-224				6/15/2010
LCS VOC 061510A	Carbon tetrachloride	µg/L	EPA624	20	20.00	0	99.4	60-157				6/15/2010

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QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: MSVOA

QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
LCS VOC 061510A	Chlorobenzene	µg/L	EPA624	19	20.00	0	97.0	63-140				6/15/2010
LCS VOC 061510A	Chloroethane	µg/L	EPA624	20	20.00	0	99.8	41-173				6/15/2010
LCS VOC 061510A	Chloroform	µg/L	EPA624	19	20.00	0	97.0	67-132				6/15/2010
LCS VOC 061510A	Chloromethane	µg/L	EPA624	17	20.00	0	87.1	10-138				6/15/2010
LCS VOC 061510A	Chloroprene	µg/L	EPA624	18	20.00	0	89.8	10-161				6/15/2010
LCS VOC 061510A	cis-1,2-Dichloroethene	µg/L	EPA624	19	20.00	0	96.8	72-137				6/15/2010
LCS VOC 061510A	cis-1,3-Dichloropropene	µg/L	EPA624	18	40.00	0	45.6	10-134				6/15/2010
LCS VOC 061510A	Cyclohexane	µg/L	EPA624	22	20.00	0	110	35-230				6/15/2010
LCS VOC 061510A	Cyclohexanone	µg/L	EPA624	< 50	40.00	0	25.5	10-374				6/15/2010
LCS VOC 061510A	Dibromochloromethane	µg/L	EPA624	19	20.00	0	95.3	68-135				6/15/2010
LCS VOC 061510A	Dibromomethane	µg/L	EPA624	18	20.00	0	92.2	74-120				6/15/2010
LCS VOC 061510A	Dichlorodifluoromethane	µg/L	EPA624	15	20.00	0	74.0	10-150				6/15/2010
LCS VOC 061510A	Ethyl acetate	µg/L	EPA624	37	40.00	0	92.0	50-155				6/15/2010
LCS VOC 061510A	Ethyl ether	µg/L	EPA624	18	20.00	0	91.0	45-146				6/15/2010
LCS VOC 061510A	Ethyl methacrylate	µg/L	EPA624	18	20.00	0	88.1	65.2-131				6/15/2010
LCS VOC 061510A	Ethylbenzene	µg/L	EPA624	20	20.00	0	98.2	69-133				6/15/2010
LCS VOC 061510A	Hexachlorobutadiene	µg/L	EPA624	18	20.00	0	88.0	35-213				6/15/2010
LCS VOC 061510A	Iodomethane	µg/L	EPA624	20	20.00	0	102	10-233				6/15/2010
LCS VOC 061510A	Isobutyl alcohol	µg/L	EPA624	< 100	80.00	0	94.9	12-202				6/15/2010
LCS VOC 061510A	Isopropyl acetate	µg/L	EPA624	18	20.00	0	88.8	55-145				6/15/2010
LCS VOC 061510A	Isopropyl alcohol	µg/L	EPA624	74	80.00	0	92.7	12-250				6/15/2010
LCS VOC 061510A	Isopropylbenzene	µg/L	EPA624	20	20.00	0	101	60-147				6/15/2010
LCS VOC 061510A	Isopropyltoluene	µg/L	EPA624	19	20.00	0	93.4	73-156				6/15/2010
LCS VOC 061510A	m,p-Xylene	µg/L	EPA624	40	40.00	0	101	70-130				6/15/2010

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: MSVOA

QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
LCS VOC 061510A	Methacrylonitrile	µg/L	EPA624	17	20.00	0	87.3	79-123				6/15/2010
LCS VOC 061510A	Methyl Acetate	µg/L	EPA624	27	20.00	0	133	5-398				6/15/2010
LCS VOC 061510A	Methyl methacrylate	µg/L	EPA624	18	20.00	0	89.7	55-128				6/15/2010
LCS VOC 061510A	Methyl tert-butyl ether	µg/L	EPA624	19	20.00	0	93.6	37-189				6/15/2010
LCS VOC 061510A	Methylcyclohexane	µg/L	EPA624	21	20.00	0	106	21.1-187				6/15/2010
LCS VOC 061510A	Methylene chloride	µg/L	EPA624	19	20.00	0	96.7	55-138				6/15/2010
LCS VOC 061510A	n-Amyl acetate	µg/L	EPA624	9.2	20.00	0	46.2	10-187				6/15/2010
LCS VOC 061510A	Naphthalene	µg/L	EPA624	18	20.00	0	90.8	41-131				6/15/2010
LCS VOC 061510A	n-Butyl alcohol	µg/L	EPA624	59	80.00	0	74.1	10-226				6/15/2010
LCS VOC 061510A	n-Butylbenzene	µg/L	EPA624	19	20.00	0	92.8	40-158				6/15/2010
LCS VOC 061510A	n-Hexane	µg/L	EPA624	19	20.00	0	95.7	10-277				6/15/2010
LCS VOC 061510A	n-Octane	µg/L	EPA624	11	20.00	0	56.2	45-158				6/15/2010
LCS VOC 061510A	n-Propylbenzene	µg/L	EPA624	19	20.00	0	93.7	67-131				6/15/2010
LCS VOC 061510A	o-Xylene	µg/L	EPA624	21	20.00	0	103	70-130				6/15/2010
LCS VOC 061510A	Pentachloroethane	µg/L	EPA624	16	20.00	0	78.0	10-314				6/15/2010
LCS VOC 061510A	Propionitrile	µg/L	EPA624	< 25	20.00	0	92.8	60-132				6/15/2010
LCS VOC 061510A	Propyl acetate	µg/L	EPA624	17	20.00	0	86.2	48-143				6/15/2010
LCS VOC 061510A	sec-Butylbenzene	µg/L	EPA624	19	20.00	0	96.8	72-157				6/15/2010
LCS VOC 061510A	Styrene	µg/L	EPA624	20	20.00	0	102	81-125				6/15/2010
LCS VOC 061510A	tert-Butyl alcohol	µg/L	EPA624	36	40.00	0	91.0	10-281				6/15/2010
LCS VOC 061510A	tert-Butylbenzene	µg/L	EPA624	20	20.00	0	98.4	75-157				6/15/2010
LCS VOC 061510A	Tetrachloroethene	µg/L	EPA624	20	20.00	0	102	49-163				6/15/2010
LCS VOC 061510A	Tetrahydrofuran	µg/L	EPA624	18	20.00	0	89.4	43-146				6/15/2010
LCS VOC 061510A	Toluene	µg/L	EPA624	19	20.00	0	96.3	67-128				6/15/2010

Report Date: 6/17/2010 Page 90 of 103



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QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: MSVOA

QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
LCS VOC 061510A	trans-1,2-Dichloroethene	µg/L	EPA624	19	20.00	0	94.1	47-146				6/15/2010
LCS VOC 061510A	trans-1,3-Dichloropropene	µg/L	EPA624	18	20.00	0	88.6	29-143				6/15/2010
LCS VOC 061510A	trans-1,4-Dichloro-2-butene	µg/L	EPA624	19	20.00	0	96.9	20-214				6/15/2010
LCS VOC 061510A	Trichloroethene	µg/L	EPA624	20	20.00	0	99.5	54-152				6/15/2010
LCS VOC 061510A	Trichlorofluoromethane	µg/L	EPA624	16	20.00	0	82.4	56-166				6/15/2010
LCS VOC 061510A	Vinyl acetate	µg/L	EPA624	28	40.00	0	69.5	11-121				6/15/2010
LCS VOC 061510A	Vinyl chloride	µg/L	EPA624	18	20.00	0	90.1	13-155				6/15/2010
LCS VOC 061510A	Xylenes, Total	µg/L	EPA624	61	60.00	0	102	70-130				6/15/2010
LCS VOC 061510A	Surr: 1,2-Dichloroethane-d4	%REC	EPA624	50	50.00		99.7	69-132				6/15/2010
LCS VOC 061510A	Surr: 4-Bromofluorobenzene	%REC	EPA624	49	50.00		97.8	85-118				6/15/2010
LCS VOC 061510A	Surr: Dibromofluoromethane	%REC	EPA624	50	50.00		101	80-120				6/15/2010
LCS VOC 061510A	Surr: Toluene-d8	%REC	EPA624	49	50.00		98.8	81-120				6/15/2010

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QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: MSVOA

QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
MB VOC 061510A	1,1,1,2-Tetrachloroethane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,1,1-Trichloroethane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,1,2,2-Tetrachloroethane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,1,2-Trichloroethane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,1-Dichloro-1-propene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,1-Dichloroethane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,1-Dichloroethene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,2,3-Trichlorobenzene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,2,3-Trichloropropane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,2,3-Trimethylbenzene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,2,4-Trichlorobenzene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,2,4-Trimethylbenzene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,2-Dibromo-3-chloropropane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,2-Dibromoethane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,2-Dichlorobenzene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,2-Dichloroethane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,2-Dichloropropane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,3,5-Trimethylbenzene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,3-Dichlorobenzene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,3-Dichloropropane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,4-Dichlorobenzene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	1,4-Dioxane	µg/L	EPA624	< 40				-				6/15/2010
MB VOC 061510A	2,2-Dichloropropane	µg/L	EPA624	< 2.0				-				6/15/2010

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QC SUMMARY REPORT

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Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: MSVOA

QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
MB VOC 061510A	2-Butanone	µg/L	EPA624	< 10				-				6/15/2010
MB VOC 061510A	2-Chloroethyl vinyl ether	µg/L	EPA624	< 5.0				-				6/15/2010
MB VOC 061510A	2-Chlorotoluene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	2-Hexanone	µg/L	EPA624	< 5.0				-				6/15/2010
MB VOC 061510A	2-Nitropropane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	4-Chlorotoluene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	4-Isopropyltoluene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	4-Methyl-2-pentanone	µg/L	EPA624	< 5.0				-				6/15/2010
MB VOC 061510A	Acetone	µg/L	EPA624	< 10				-				6/15/2010
MB VOC 061510A	Acetonitrile	µg/L	EPA624	< 5.0				-				6/15/2010
MB VOC 061510A	Acrolein	µg/L	EPA624	< 5.0				-				6/15/2010
MB VOC 061510A	Acrylonitrile	µg/L	EPA624	< 10				-				6/15/2010
MB VOC 061510A	Allyl chloride	µg/L	EPA624	< 5.0				-				6/15/2010
MB VOC 061510A	Benzene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Benzyl chloride	µg/L	EPA624	< 5.0				-				6/15/2010
MB VOC 061510A	Bis(2-chloroisopropyl) ether	µg/L	EPA624	< 5.0				-				6/15/2010
MB VOC 061510A	Bromobenzene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Bromochloromethane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Bromodichloromethane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Bromoform	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Bromomethane	µg/L	EPA624	< 5.0				-				6/15/2010
MB VOC 061510A	Butyl acetate	µg/L	EPA624	< 5.0				-				6/15/2010
MB VOC 061510A	Carbon disulfide	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Carbon tetrachloride	µg/L	EPA624	< 2.0				-				6/15/2010

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: MSVOA

QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
MB VOC 061510A	Chlorobenzene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Chloroethane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Chloroform	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Chloromethane	µg/L	EPA624	< 5.0				-				6/15/2010
MB VOC 061510A	Chloroprene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	cis-1,2-Dichloroethene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	cis-1,3-Dichloropropene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Cyclohexane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Cyclohexanone	µg/L	EPA624	< 50				-				6/15/2010
MB VOC 061510A	Dibromochloromethane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Dibromomethane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Dichlorodifluoromethane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Ethyl acetate	µg/L	EPA624	< 10				-				6/15/2010
MB VOC 061510A	Ethyl ether	µg/L	EPA624	< 10				-				6/15/2010
MB VOC 061510A	Ethyl methacrylate	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Ethylbenzene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Hexachlorobutadiene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Iodomethane	µg/L	EPA624	< 5.0				-				6/15/2010
MB VOC 061510A	Isobutyl alcohol	µg/L	EPA624	< 100				-				6/15/2010
MB VOC 061510A	Isopropyl acetate	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Isopropyl alcohol	µg/L	EPA624	< 25				-				6/15/2010
MB VOC 061510A	Isopropylbenzene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Isopropyltoluene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	m,p-Xylene	µg/L	EPA624	< 2.0				-				6/15/2010

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: MSVOA

QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
MB VOC 061510A	Methacrylonitrile	µg/L	EPA624	< 5.0				-				6/15/2010
MB VOC 061510A	Methyl Acetate	µg/L	EPA624	< 5.0				-				6/15/2010
MB VOC 061510A	Methyl methacrylate	µg/L	EPA624	< 5.0				-				6/15/2010
MB VOC 061510A	Methyl tert-butyl ether	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Methylcyclohexane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Methylene chloride	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	n-Amyl acetate	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Naphthalene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	n-Butyl alcohol	µg/L	EPA624	< 25				-				6/15/2010
MB VOC 061510A	n-Butylbenzene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	n-Hexane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	n-Octane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	n-Propylbenzene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	o-Xylene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Pentachloroethane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Propionitrile	µg/L	EPA624	< 25				-				6/15/2010
MB VOC 061510A	Propyl acetate	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	sec-Butylbenzene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Styrene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	tert-Butyl alcohol	µg/L	EPA624	< 20				-				6/15/2010
MB VOC 061510A	tert-Butylbenzene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Tetrachloroethene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Tetrahydrofuran	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Toluene	µg/L	EPA624	< 2.0				-				6/15/2010

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: MSVOA

QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
MB VOC 061510A	TPH C6-C10 (GRO)	µg/L	EPA624	< 20				-				6/15/2010
MB VOC 061510A	trans-1,2-Dichloroethene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	trans-1,3-Dichloropropene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	trans-1,4-Dichloro-2-butene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Trichloroethene	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Trichlorofluoromethane	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Vinyl acetate	µg/L	EPA624	< 5.0				-				6/15/2010
MB VOC 061510A	Vinyl chloride	µg/L	EPA624	< 1.0				-				6/15/2010
MB VOC 061510A	Xylenes, Total	µg/L	EPA624	< 2.0				-				6/15/2010
MB VOC 061510A	Surr: 1,2-Dichloroethane-d4	%REC	EPA624	51	50.00		103	69-132				6/15/2010
MB VOC 061510A	Surr: 4-Bromofluorobenzene	%REC	EPA624	51	50.00		101	85-118				6/15/2010
MB VOC 061510A	Surr: Dibromofluoromethane	%REC	EPA624	51	50.00		102	80-120				6/15/2010
MB VOC 061510A	Surr: Toluene-d8	%REC	EPA624	51	50.00		101	81-120				6/15/2010



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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: MSVOA

QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
1006230-001AMS	1,1,1-Trichloroethane	µg/L	EPA624	21	20.00	0	106	67-147				6/15/2010
1006230-001AMS	1,1-Dichloroethene	µg/L	EPA624	20	20.00	0	101	62-152				6/15/2010
1006230-001AMS	1,2-Dichlorobenzene	µg/L	EPA624	21	20.00	0	103	70-130				6/15/2010
1006230-001AMS	1,2-Dichloroethane	µg/L	EPA624	20	20.00	0	102	39-162				6/15/2010
1006230-001AMS	1,2-Dichloropropane	µg/L	EPA624	20	20.00	0	101	70-130				6/15/2010
1006230-001AMS	Benzene	µg/L	EPA624	21	20.00	0	103	66-145				6/15/2010
1006230-001AMS	Chlorobenzene	µg/L	EPA624	20	20.00	0	98.4	77-123				6/15/2010
1006230-001AMS	Chloroform	µg/L	EPA624	21	20.00	0	104	50-146				6/15/2010
1006230-001AMS	Ethylbenzene	µg/L	EPA624	20	20.00	0	100	70-130				6/15/2010
1006230-001AMS	Isopropylbenzene	µg/L	EPA624	21	20.00	0	104	70-130				6/15/2010
1006230-001AMS	Methyl tert-butyl ether	µg/L	EPA624	21	20.00	0	103	48-142				6/15/2010
1006230-001AMS	Methylene chloride	µg/L	EPA624	19	20.00	0	96.5	65-135				6/15/2010
1006230-001AMS	Naphthalene	µg/L	EPA624	18	20.00	0	90.4	44-129				6/15/2010
1006230-001AMS	Toluene	µg/L	EPA624	20	20.00	0	101	18-192				6/15/2010
1006230-001AMS	Trichloroethene	µg/L	EPA624	20	20.00	0	102	61-153				6/15/2010
1006230-001AMS	Xylenes, Total	µg/L	EPA624	62	60.00	0	103	42-167				6/15/2010
1006230-001AMS	Surr: 1,2-Dichloroethane-d4	%REC	EPA624	52	50.00		105	77-144				6/15/2010
1006230-001AMS	Surr: 4-Bromofluorobenzene	%REC	EPA624	50	50.00		99.1	80-123				6/15/2010
1006230-001AMS	Surr: Dibromofluoromethane	%REC	EPA624	53	50.00		106	80-124				6/15/2010
1006230-001AMS	Surr: Toluene-d8	%REC	EPA624	49	50.00		98.8	80-125				6/15/2010

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: MSVOA

QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
1006230-001AMSD	1,1,1-Trichloroethane	µg/L	EPA624	21	20.00	0	107	67-147	0.847	25		6/15/2010
1006230-001AMSD	1,1-Dichloroethene	µg/L	EPA624	20	20.00	0	101	62-152	0.197	25		6/15/2010
1006230-001AMSD	1,2-Dichlorobenzene	µg/L	EPA624	21	20.00	0	104	70-130	1.40	25		6/15/2010
1006230-001AMSD	1,2-Dichloroethane	µg/L	EPA624	21	20.00	0	103	39-162	0.782	25		6/15/2010
1006230-001AMSD	1,2-Dichloropropane	µg/L	EPA624	20	20.00	0	103	70-130	1.57	25		6/15/2010
1006230-001AMSD	Benzene	µg/L	EPA624	21	20.00	0	104	66-145	1.01	25		6/15/2010
1006230-001AMSD	Chlorobenzene	µg/L	EPA624	20	20.00	0	101	77-123	2.16	25		6/15/2010
1006230-001AMSD	Chloroform	µg/L	EPA624	21	20.00	0	106	50-146	2.01	25		6/15/2010
1006230-001AMSD	Ethylbenzene	µg/L	EPA624	20	20.00	0	102	70-130	2.07	25		6/15/2010
1006230-001AMSD	Isopropylbenzene	µg/L	EPA624	21	20.00	0	104	70-130	0.336	25		6/15/2010
1006230-001AMSD	Methyl tert-butyl ether	µg/L	EPA624	21	20.00	0	105	48-142	1.44	25		6/15/2010
1006230-001AMSD	Methylene chloride	µg/L	EPA624	20	20.00	0	98.1	65-135	1.70	25		6/15/2010
1006230-001AMSD	Naphthalene	µg/L	EPA624	18	20.00	0	92.3	44-129	2.14	25		6/15/2010
1006230-001AMSD	Toluene	µg/L	EPA624	20	20.00	0	102	18-192	1.04	25		6/15/2010
1006230-001AMSD	Trichloroethene	µg/L	EPA624	20	20.00	0	102	61-153	0.540	25		6/15/2010
1006230-001AMSD	Xylenes, Total	µg/L	EPA624	63	60.00	0	105	42-167	2.07	25		6/15/2010
1006230-001AMSD	Surr: 1,2-Dichloroethane-d4	%REC	EPA624	53	50.00		105	77-144				6/15/2010
1006230-001AMSD	Surr: 4-Bromofluorobenzene	%REC	EPA624	50	50.00		99.7	80-123				6/15/2010
1006230-001AMSD	Surr: Dibromofluoromethane	%REC	EPA624	53	50.00		105	80-124				6/15/2010
1006230-001AMSD	Surr: Toluene-d8	%REC	EPA624	49	50.00		98.4	80-125				6/15/2010

Report Date: 6/17/2010 Page 98 of 103



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Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: WC

QC Type: DUP

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
1006232-001BDUP	Chemical Oxygen Demand	mg/L	HACH 8000	340	0	363.0	0	-	5.37	20		6/15/2010



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QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: WC

QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
LCS-R15460	Chemical Oxygen Demand	mg/L	HACH 8000	330	300.0	0	109	85-115				6/15/2010
LCS1-R15460	Chemical Oxygen Demand	mg/L	HACH 8000	110	100.0	0	110	85-115				6/15/2010
LCS2-R15460	Chemical Oxygen Demand	mg/L	HACH 8000	1,100	1,000	0	107	85-115				6/15/2010
LCS3-R15460	Chemical Oxygen Demand	mg/L	HACH 8000	10	10.00	0	100	85-115				6/15/2010



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Jose Rocha

QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: WC

QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
MB-R15460	Chemical Oxygen Demand	mg/L	HACH 8000	< 10				-				6/15/2010



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QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: WC

QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
1006246-011BMS	Chemical Oxygen Demand	mg/L	HACH 8000	60	50.00	6.000	108	85-115				6/15/2010



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QC SUMMARY REPORT

Client: Utah DEQ DERR

Lab Set ID: 1006246

Project: Red Butte Oil Spill

Dept: WC

QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	% REC	Limits	% RPD	RPD Limit	Qualifiers	Analysis Date
1006246-011BMSD	Chemical Oxygen Demand	mg/L	HACH 8000	59	50.00	6.000	106	85-115	1.68	10		6/15/2010

RUSH

American West Analytical Laboratories

WORK ORDER Summary

15-Jun-10

Work Order: 1006246

WO Type: Standard

Client ID: UTD100	Contact: Jim Harris	COMMENTS : No Hard Copies. QC 2+ / Next day Rush - Footnote report, COD's were poured off in lab and preserved; <i>el</i>
Project ID:	PM:	
Project: Red Butte Oil Spill	QC Level: LEVEL II+	
ChkList Completed On:	Completed By:	
ChkList Reviewed On:	Reviewed By:	
WO Reviewed On:	Reviewed By: <i>HKSJ HOK-DB</i>	

Sample ID	Client Sample ID	Date Collected	Date Received	Date Due	Matrix	Test Code	Hld	MS	SEL	Sub	Storage
1006246-001A	Red Butte Below Gardens	6/14/2010 11:20:00 AM	6/14/2010 7:50:00 PM	6/16/2010	Aqueous	624-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	vOC
1006246-001B				6/16/2010		COD-HACH8000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ww - cod
1006246-001C				6/16/2010		200.7-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: CR										
				6/16/2010		200.7-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		200.8-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: AS BA CD PB SE AG										
				6/16/2010		200.8-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-245.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
1006246-001D				6/16/2010		8015-W-TPH(40ML)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
				6/16/2010		UT-TPH-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
1006246-002A	Red Butte@ 1100 E.	6/14/2010 12:20:00 PM		6/16/2010		624-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	vOC
1006246-002B				6/16/2010		COD-HACH8000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ww - cod
1006246-002C				6/16/2010		200.7-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: CR										
				6/16/2010		200.7-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		200.8-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: AS BA CD PB SE AG										
				6/16/2010		200.8-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-245.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg

WORK ORDER Summary

15-Jun-10

Work Order: 1006246
 WO Type: Standard

Client ID: UTD100	Contact: Jim Harris	COMMENTS: No Hard Copies. QC 2+ / Next day Rush;
Project ID:	PM:	
Project: Red Butte Oil Spill	QC Level: LEVEL II+	
ChkList Completed On:	Completed By:	
ChkList Reviewed On:	Reviewed By:	
WO Reviewed On:	Reviewed By:	

Sample ID	Client Sample ID	Date Collected	Date Received	Date Due	Matrix	Test Code	Hld	MS	SEL	Sub	Storage
1006246-002D	Red Butte@ 1100 E.	6/14/2010 12:20:00 PM	6/14/2010 7:50:00 PM	6/16/2010	Aqueous	8015-W-TPH(40ML)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
				6/16/2010		UT-TPH-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
1006246-003A	1300 S. Storm Drain	6/14/2010 1:00:00 PM		6/16/2010		624-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	vOC
1006246-003B				6/16/2010		COD-HACH8000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ww - cod
1006246-003C				6/16/2010		200.7-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: CR			6/16/2010		200.7-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: AS BA CD PB SE AG			6/16/2010		200.8-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		200.8-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-245.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
1006246-003D				6/16/2010		8015-W-TPH(40ML)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
				6/16/2010		UT-TPH-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
1006246-004A	900 S. Storm Drain	6/14/2010 2:18:00 PM		6/16/2010		624-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	vOC
1006246-004B				6/16/2010		COD-HACH8000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ww - cod
1006246-004C				6/16/2010		200.7-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: CR			6/16/2010		200.7-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: AS BA CD PB SE AG			6/16/2010		200.8-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		200.8-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-245.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg

WORK ORDER Summary

15-Jun-10

Work Order: 1006246

WO Type: Standard

Client ID: UTD100	Contact: Jim Harris	COMMENTS : No Hard Copies. QC 2+ / Next day Rush;
Project ID:	PM:	
Project: Red Butte Oil Spill	QC Level: LEVEL II+	
ChkList Completed On:	Completed By:	
ChkList Reviewed On:	Reviewed By:	
WO Reviewed On:	Reviewed By:	

Sample ID	Client Sample ID	Date Collected	Date Received	Date Due	Matrix	Test Code	Hld	MS	SEL	Sub	Storage
1006246-004C	900 S. Storm Drain	6/14/2010 2:18:00 PM	6/14/2010 7:50:00 PM	6/16/2010	Aqueous	HG-DW-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
1006246-004D				6/16/2010		8015-W-TPH(40ML)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
				6/16/2010		UT-TPH-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
1006246-005A	Jordan @ Indiana	6/14/2010 3:00:00 PM		6/16/2010		624-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	vOC
1006246-005B				6/16/2010		COD-HACH8000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ww - cod
1006246-005C				6/16/2010		200.7-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: CR			6/16/2010		200.7-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		200.8-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: AS BA CD PB SE AG			6/16/2010		200.8-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-245.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
1006246-005D				6/16/2010		8015-W-TPH(40ML)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
				6/16/2010		UT-TPH-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
1006246-006A	New State Canal	6/14/2010 4:10:00 PM		6/16/2010		624-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	vOC
1006246-006B				6/16/2010		COD-HACH8000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ww - cod
1006246-006C				6/16/2010		200.7-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: CR			6/16/2010		200.7-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		200.8-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: AS BA CD PB SE AG			6/16/2010		200.8-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg

WORK ORDER Summary

15-Jun-10

Work Order: 1006246
WO Type: Standard

Client ID: UTD100	Contact: Jim Harris	COMMENTS : No Hard Copies. QC 2+ / Next day Rush;
Project ID:	PM:	
Project: Red Butte Oil Spill	QC Level: LEVEL II+	
ChkList Completed On:	Completed By:	
ChkList Reviewed On:	Reviewed By:	
WO Reviewed On:	Reviewed By:	

Sample ID	Client Sample ID	Date Collected	Date Received	Date Due	Matrix	Test Code	Hld	MS	SEL	Sub	Storage
1006246-006C	New State Canal	6/14/2010 4:10:00 PM	6/14/2010 7:50:00 PM	6/16/2010	Aqueous	HG-DW-245.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
1006246-006D				6/16/2010		8015-W-TPH(40ML)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
				6/16/2010		UT-TPH-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
1006246-007A	Burnham Dam	6/14/2010 4:30:00 PM		6/16/2010		624-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	vOC
1006246-007B				6/16/2010		COD-HACH8000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ww - cod
1006246-007C				6/16/2010		200.7-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: CR										
				6/16/2010		200.7-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		200.8-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: AS BA CD PB SE AG										
				6/16/2010		200.8-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-245.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
1006246-007D				6/16/2010		8015-W-TPH(40ML)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
				6/16/2010		UT-TPH-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
1006246-008A	Jordan R. @ Cudahy Lane	6/14/2010 5:10:00 PM		6/16/2010		624-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	vOC
1006246-008B				6/16/2010		COD-HACH8000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ww - cod
1006246-008C				6/16/2010		200.7-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: CR										
				6/16/2010		200.7-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		200.8-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: AS BA CD PB SE AG										

WORK ORDER Summary

15-Jun-10

Work Order: 1006246
WO Type: Standard

Client ID: UTD100	Contact: Jim Harris
Project ID:	PM:
Project: Red Butte Oil Spill	QC Level: LEVEL II+
ChkList Completed On:	Completed By:
ChkList Reviewed On:	Reviewed By:
WO Reviewed On:	Reviewed By:

COMMENTS : No Hard Copies. QC 2+ / Next day Rush;

Sample ID	Client Sample ID	Date Collected	Date Received	Date Due	Matrix	Test Code	Hld	MS	SEL	Sub	Storage
1006246-008C	Jordan R. @ Cudahy Lane	6/14/2010 5:10:00 PM	6/14/2010 7:50:00 PM	6/16/2010	Aqueous	200.8-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-245.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
1006246-008D				6/16/2010		8015-W-TPH(40ML)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
				6/16/2010		UT-TPH-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
1006246-009A	Jordan @ 1800 N.	6/14/2010 5:30:00 PM		6/16/2010		624-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	vOC
1006246-009B				6/16/2010		COD-HACH8000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ww - cod
1006246-009C				6/16/2010		200.7-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: CR			6/16/2010		200.7-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		200.8-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: AS BA CD PB SE AG			6/16/2010		200.8-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-245.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
1006246-009D				6/16/2010		8015-W-TPH(40ML)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
				6/16/2010		UT-TPH-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
1006246-010A	Jordan @ 300 N.	6/14/2010 5:50:00 PM		6/16/2010		624-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	vOC
1006246-010B				6/16/2010		COD-HACH8000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ww - cod
1006246-010C				6/16/2010		200.7-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: CR			6/16/2010		200.7-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg

WORK ORDER Summary

15-Jun-10

Work Order: 1006246
WO Type: Standard

Client ID: UTD100	Contact: Jim Harris	COMMENTS : No Hard Copies. QC 2+ / Next day Rush;
Project ID:	PM:	
Project: Red Butte Oil Spill	QC Level: LEVEL II+	
ChkList Completed On:	Completed By:	
ChkList Reviewed On:	Reviewed By:	
WO Reviewed On:	Reviewed By:	

Sample ID	Client Sample ID	Date Collected	Date Received	Date Due	Matrix	Test Code	Hld	MS	SEL	Sub	Storage
1006246-010C	Jordan @ 300 N. SEL Analytes: AS BA CD PB SE AG	6/14/2010 5:50:00 PM	6/14/2010 7:50:00 PM	6/16/2010	Aqueous	200.8-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		200.8-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-245.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
1006246-010D				6/16/2010		8015-W-TPH(40ML)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
				6/16/2010		UT-TPH-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
1006246-011A	Jordan @ 1700 S.	6/14/2010 6:20:00 PM		6/16/2010		624-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	vOC
1006246-011B				6/16/2010		COD-HACH8000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ww - cod
1006246-011C	SEL Analytes: CR			6/16/2010		200.7-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		200.7-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
	SEL Analytes: AS BA CD PB SE AG			6/16/2010		200.8-W	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		200.8-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-245.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
				6/16/2010		HG-DW-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df / met/hg
1006246-011D				6/16/2010		8015-W-TPH(40ML)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hall-TPH
				6/16/2010		UT-TPH-W-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hall-TPH



Utah
Department of Health
Bureau of Chemical and Environmental Services

Red Butte Oil Spill

Soils will be

1006248

5 day Rush

1006246

Next Day

CHAIN OF CUSTODY

163

46 North Medical Drive, Salt Lake City, UT 84113-1105
Phone 801-883-4655 Fax 801-584-8251
URL <http://health.utah.gov/els/envsrv>

- Hand delivered
- Shipped samples
- Cooler returned

System/Agency Name:		System/Agency Number:		Cost/Project Code:		REQUESTED TESTS				Received Date and Time:	
REPORTING/CONTACT		BILLING (list if different)									
Attn: <u>JIM HARRIS</u>	Special code: _____	Attn: _____				VUC 3 T. METALS 900 / COO DRO		Receipt temperature	Receipt pH	Sample Receipt Conditions	
Address: <u>195 N 1150 W</u>	Address: _____				COOLANT / NO COOLANT						
City, State, ZIP: <u>SLC UT 84115</u>	City, State, ZIP: _____				<input type="checkbox"/> Documentation complete <input checked="" type="checkbox"/> Temperature within range <input type="checkbox"/> Within holding time <input checked="" type="checkbox"/> Proper containers and in-date <input checked="" type="checkbox"/> Containers intact <input type="checkbox"/> Acceptable pH <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Custody seals intact						
Phone: <u>801 541 3069</u>	Phone: _____				LAB NUMBER						
Submitted by: _____	Fax: _____										
COLLECTION POINT DESCRIPTION	COLLECTED BY (Initials)	COLLECTED DATE (mm/dd/yy)	COLLECTED TIME (24 hour)	COMMENTS							
RED BUTTE BELOW GARAGES	JH	6/14/10	1120		X	X	X	/		0.14	
Red Butte @ 1100 E	JH	6/14/10	1220		X	X	X	/		0.14	
1300 S. STORM DRAIN	JH	6/14/10	1300		X	X	X	/		0.14	
900 S. STORM DRAIN	JH	6/14/10	1418		X	X	X	/		0.14	
JORDAN @ INDIANA	JH	6/14/10	1500		X	X	X	/		0.14	

Dispatched by: _____	Date and Time: _____	Carrier Company Name: _____	Invoice/Arbill #: _____
Relinquished by: <u>[Signature]</u>	Date and Time: <u>6/14/10 19:15</u>	Received by: <u>[Signature]</u>	Date and Time: <u>6/14/10 1920</u>
Relinquished to DLS by: <u>[Signature]</u>	Date and Time: <u>6/14/10 1900</u>	Received to DLS by: <u>[Signature]</u>	Date and Time: <u>6/14/10 1950</u>



Utah
Department of Health
Bureau of Chemical and Environmental Services

(801) 641 1236
463W 3600 S

1006246 - Next Day 1006247 ch

CHAIN OF CUSTODY

46 North Medical Drive, Salt Lake City, UT 84113-1105
Phone 801-883-4655 Fax 801-584-8251
URL <http://health.utah.gov/els/envsrv>

1006248 - for BOD 5 day Rush 263

- Hand delivered
- Shipped samples
- Cooler returned

System/Agency Name:		System/Agency Number:		Cost/Project Code:		REQUESTED TESTS				Received Date and Time:	
REPORTING/CONTACT		BILLING (list if different)		V.O.G. RCRA T. Metals BOD/COD N60				6/14/2010 1952h		Sample Receipt Conditions COOLANT / NO COOLANT Yes No <input type="checkbox"/> Documentation complete <input checked="" type="checkbox"/> Temperature within-range <input checked="" type="checkbox"/> Within holding time <input checked="" type="checkbox"/> Proper containers and in-date <input checked="" type="checkbox"/> Containers intact <input type="checkbox"/> Acceptable pH <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Custody seals intact	
Attn: <u>Jim Harris</u>	Special code: _____	Attn: _____	Address: _____					City, State, ZIP: <u>SLC UT 84114</u>	Phone: <u>(801) 541-3069</u>		
COLLECTION POINT DESCRIPTION	COLLECTED BY (initials)	COLLECTED DATE (mm/dd/yy)	COLLECTED TIME (24 hour)	COMMENTS					Receipt temperature °C	Receipt pH	LAB NUMBER
Newstate Canal	RB/DTE	6/14/10	1610		X	X	X	/	0.4		
Bunham Dam	RB/DTE	6/14/10	1630		X	X	X	/	0.4		
Jordan R. @ Cadahy lane	RB/DTE	6/14/10	1710		X	X	X	/	0.4		
Jordan @ 1800 N.	RB/DTE	6/14/10	1730		X	X	X	/	0.4		
Jordan @ 300 N.	RB/DTE	6/14/10	1750	-	X	X	X	/	0.4		

Dispatched by: _____	Date and Time: _____	Courier Company Name: _____	Invoice/Airbill #: _____
Relinquished by: <u>Daniel G. [Signature]</u>	Date and Time: <u>6/14/10 1952</u>	Received by: <u>[Signature]</u>	Date and Time: <u>6/14/10 1952</u>
Relinquished to DLS by: _____	Date and Time: _____	Received to DLS by: _____	Date and Time: _____



Utah
Department of Health
Bureau of Chemical and Environmental Services

1006246
Next Day

1006248

CHAIN OF CUSTODY

1006248- BOD

5 day Bus

363

46 North Medical Drive, Salt Lake City, UT 84113-1105
Phone 801-883-4655 Fax 801-584-8251
URL <http://health.utah.gov/els/envsrv>

- Hand delivered
- Shipped samples
- Cooler returned

System/Agency Name:		System/Agency Number:		Cost/Project Code:		REQUESTED TESTS				Received Date and Time:			
REPORTING/CONTACT Attn: <u>Jim Harris</u> Address: <u>195N. 1950W.</u> City, State, ZIP: <u>SLC, UT, 84114</u> Phone: <u>(801) 541-3069</u> Fax: _____ Email: _____ Submitted by: _____		BILLING (list if different) Special code: _____ Attn: _____ Address: _____ City, State, ZIP: _____ Phone: _____ Fax: _____		VOC T. Metals BOD/COD DRD				Received temperature 0.4		Received pH _____		Received Date and Time: <u>6/14/2010 1953h</u>	
COLLECTION POINT DESCRIPTION		COLLECTED BY (Initials)	COLLECTED DATE (mm/dd/yy)	COLLECTED TIME (24 hour)	COMMENTS						Sample Receipt Conditions		
<u>Jordan @ 1700 S.</u>		<u>RE/DIE</u>	<u>6/14/10</u>	<u>1820</u>							COOLANT / NO COOLANT Yes No <input type="checkbox"/> <input type="checkbox"/> Documentation complete <input checked="" type="checkbox"/> <input type="checkbox"/> Temperature within-range <input checked="" type="checkbox"/> <input type="checkbox"/> Within holding time <input checked="" type="checkbox"/> <input type="checkbox"/> Proper containers and in-date <input checked="" type="checkbox"/> <input type="checkbox"/> Containers intact <input type="checkbox"/> <input type="checkbox"/> Acceptable pH <input type="checkbox"/> N/A <input checked="" type="checkbox"/> <input type="checkbox"/> Custody seals intact		
											LAB NUMBER		



State of Utah
Department of Environmental Quality
Division of Water Quality

James Harris
Monitoring Section Manager

Cell 801 541-3069

195 North 1950 West
PO BOX 144870
Salt Lake City, Utah 84114-4870

Phone: (801) 536-4360
Fax: (801) 536-4301
Email: jamesharris@utah.gov
www.waterquality.utah.gov

Dispatched by:	Date and Time:	Courier Company Name:	Invoice/Airbill #:
<u>Denise [Signature]</u>	<u>6/14/10 1953</u>	<u>[Signature]</u>	
Relinquished by:	Date and Time:	Received by:	Date and Time:
<u>[Signature]</u>	<u>6/14/10 1953</u>	<u>[Signature]</u>	<u>6/14/10 1953</u>
Relinquished to DLS by:	Date and Time:	Received to DLS by:	Date and Time:

Sample Set: 1006246

Preservation Check Sheet

Sample Set Extension and pH

Bottle Type	Preservative	All OK	Except	Except	Except	Except	Except	Except	Except	Except	Except	Except	Except	Except	Except	Except	Except
Ammonia	pH <2 H ₂ SO ₄																
COD	pH <2 H ₂ SO ₄	✓															
Cyanide	PH >12 NaOH																
Metals	pH <2 HNO ₃	✓															
NO ₂ & NO ₃	pH <2 H ₂ SO ₄																
Nutrients	pH <2 H ₂ SO ₄																
O & G	pH <2 HCL																
Phenols	pH <2 H ₂ SO ₄																
Sulfide	pH > 9NaOH, Zn Acetate																
TKN	pH <2 H ₂ SO ₄																
TOC	pH <2 H ₃ PO ₄																
TOX	pH <2 H ₂ SO ₄																
T PO ₄	pH <2 H ₂ SO ₄																
TPH	pH <2 HCL																

- Procedure:
- 1) Pour a small amount of sample in the sample lid
 - 2) Pour sample from Lid gently over wide range pH paper
 - 3) **Do Not** dip the pH paper in the sample bottle or lid
 - 4) If sample is not preserved properly list its extension and receiving pH in the appropriate column above
 - 5) Flag COC, notify client if requested
 - 6) Place client conversation on COC
 - 7) Samples may be adjusted

Frequency: All samples requiring preservation