AMERICAN
WEST
ANALYTICAL
LABORATORIES

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

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

RE: Red Butte Spill

Dear Jim Harris: Lab Set ID: 1012109

American West Analytical Laboratories received 6 sample(s) on 12/6/2010 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.

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 quantitaion 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. Analytical results are reported to three significant figures for quality control and calculation purposes.

Thank You,

Approved by: Jose G. Rocha

Digitally signed by Jose G. Rocha
DN: cn=Jose G. Rocha, o=American West Analytical Laboratories, ou=Quality Assurance Officer, email=jose@awal-labs.com, c=US
Date: 2010.12.08 15:47:08 -07'00'

Laboratory Director or designee

INORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR **Contact:** Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-001
Client Sample ID: RB AB Gardens 4992095
Collection Date: 12/6/2010 1515h
Received Date: 12/6/2010 1732h

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chemical Oxygen Demand	mg/L		12/7/2010 0930h	HACH 8000	10.0	**11.0**	
Total Recoverable Petroleum Hydrocarbons	mg/L		12/7/2010 1217h	E1664A-SGT	3.00	< 3.00	

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INORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR **Contact:** Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-002
Client Sample ID: RB NR Greenhouse 4992088
Collection Date: 12/6/2010 1545h
Received Date: 12/6/2010 1732h

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chemical Oxygen Demand	mg/L		12/7/2010 0930h	HACH 8000	10.0	< 10.0	
Total Recoverable Petroleum Hydrocarbons	mg/L		12/7/2010 1217h	E1664A-SGT	3.00	< 3.00	

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INORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR **Contact:** Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-003
Client Sample ID: RB @ Foothill 4992086
Collection Date: 12/6/2010 1615h
Received Date: 12/6/2010 1732h

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chemical Oxygen Demand	mg/L		12/7/2010 0930h	HACH 8000	10.0	**18.0**	
Total Recoverable Petroleum Hydrocarbons	mg/L		12/7/2010 1217h	E1664A-SGT	3.00	**3.24**	

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INORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR **Contact:** Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-004
Client Sample ID: RB @ Miller Pk 4992084
Collection Date: 12/6/2010 1640h
Received Date: 12/6/2010 1732h

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chemical Oxygen Demand	mg/L		12/7/2010 0930h	HACH 8000	10.0	**26.0**	
Total Recoverable Petroleum Hydrocarbons	mg/L		12/7/2010 1217h	E1664A-SGT	3.00	**3.01**	

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INORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-005
Client Sample ID: RB @ 1100 E. 4992083
Collection Date: 12/6/2010 1700h
Received Date: 12/6/2010 1732h

Analytical Results	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chemical Oxygen Demand	mg/L		12/7/2010 0930h	HACH 8000	10.0	**36.0**	
Total Recoverable Petroleum Hydrocarbons	mg/L		12/7/2010 1217h	E1664A-SGT	3.00	< 3.00	

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-001D
Client Sample ID: RB AB Gardens 4992095
Collection Date: 12/6/2010 1515h
Analyzed: 12/7/2010 0556h
Received Date: 12/6/2010 1732h
Extracted: 12/6/2010 1754h
Method Used: SW8015D

Analytical Results TPH-ORO by GC/FID Method 8015D/3510C

Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		0.0526	< 0.0526	
Surr: C36		10-200	**129**	

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-002D
Client Sample ID: RB NR Greenhouse 4992088
Collection Date: 12/6/2010 1545h
Analyzed: 12/7/2010 0614h
Received Date: 12/6/2010 1732h
Extracted: 12/6/2010 1754h
Method Used: SW8015D

Analytical Results TPH-ORO by GC/FID Method 8015D/3510C

Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		0.0526	< 0.0526	
Surr: C36		10-200	**137**	

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-003D
Client Sample ID: RB @ Foothill 4992086
Collection Date: 12/6/2010 1615h
Analyzed: 12/7/2010 0709h
Received Date: 12/6/2010 1732h
Extracted: 12/6/2010 1754h
Method Used: SW8015D

Analytical Results TPH-ORO by GC/FID Method 8015D/3510C

Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		0.0526	< 0.0526	
Surr: C36		10-200	**128**	

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-004D
Client Sample ID: RB @ Miller Pk 4992084
Collection Date: 12/6/2010 1640h
Analyzed: 12/7/2010 0727h
Received Date: 12/6/2010 1732h
Extracted: 12/6/2010 1754h
Method Used: SW8015D

Analytical Results TPH-ORO by GC/FID Method 8015D/3510C

Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		0.0526	< 0.0526	
Surr: C36		10-200	**136**	

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-005D
Client Sample ID: RB @ 1100 E. 4992083
Collection Date: 12/6/2010 1700h
Analyzed: 12/7/2010 0745h
Received Date: 12/6/2010 1732h
Extracted: 12/6/2010 1754h
Method Used: SW8015D

Analytical Results TPH-ORO by GC/FID Method 8015D/3510C

Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		0.0526	< 0.0526	
Surr: C36		10-200	**140**	

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-001C
Client Sample ID: RB AB Gardens 4992095
Collection Date: 12/6/2010 1515h
Analyzed: 12/8/2010 0800h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 0841h
Method Used: SW8015D

Analytical Results TPH-DRO (C10-C28) by GC/FID Method 8015D/3510C

Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics C10-C28	68476-34-6	0.526	< 0.526	
Surr: 4-Bromofluorobenzene	460-00-4	10-190	**54.5**	

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-002C
Client Sample ID: RB NR Greenhouse 4992088
Collection Date: 12/6/2010 1545h
Analyzed: 12/8/2010 0822h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 0841h
Method Used: SW8015D

Analytical Results TPH-DRO (C10-C28) by GC/FID Method 8015D/3510C

Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics C10-C28	68476-34-6	0.500	< 0.500	
Surr: 4-Bromofluorobenzene	460-00-4	10-190	**52.0**	

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Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-003C
Client Sample ID: RB @ Foothill 4992086
Collection Date: 12/6/2010 1615h
Analyzed: 12/8/2010 0925h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 0841h
Method Used: SW8015D

Analytical Results TPH-DRO (C10-C28) by GC/FID Method 8015D/3510C

Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics C10-C28	68476-34-6	0.513	< 0.513	
Surr: 4-Bromofluorobenzene	460-00-4	10-190	**35.7**	

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Laboratory Director

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QA Officer

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-004C
Client Sample ID: RB @ Miller Pk 4992084
Collection Date: 12/6/2010 1640h
Analyzed: 12/8/2010 0946h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 0841h
Method Used: SW8015D

Analytical Results TPH-DRO (C10-C28) by GC/FID Method 8015D/3510C

Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics C10-C28	68476-34-6	0.500	< 0.500	
Surr: 4-Bromofluorobenzene	460-00-4	10-190	**32.4**	

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Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-005C
Client Sample ID: RB @ 1100 E. 4992083
Collection Date: 12/6/2010 1700h
Analyzed: 12/8/2010 1007h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 0841h
Method Used: SW8015D

Analytical Results TPH-DRO (C10-C28) by GC/FID Method 8015D/3510C

Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics C10-C28	68476-34-6	0.500	< 0.500	
Surr: 4-Bromofluorobenzene	460-00-4	10-190	**35.6**	

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-001B
Client Sample ID: RB AB Gardens 4992095
Collection Date: 12/6/2010 1515h
Analyzed: 12/7/2010 2011h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: SW8270D

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463 West 3600 South
Salt Lake City, UT
84115

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Toll Free (888) 263-8686
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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Analytical Results SVOA Fractionation by GC/MS Method 8270D/3510C

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	
Fluorene	86-73-7	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
C11-C12 Aliphatic hydrocarbons		10.0	< 10.0	
C13-C16 Aliphatic hydrocarbons		10.0	< 10.0	
C17-C21 Aliphatic hydrocarbons		10.0	< 10.0	
C22-C35 Aliphatic hydrocarbons		10.0	< 10.0	
C11-C13 Alkyl Naphthalenes		10.0	< 10.0	
Total C12-C22 PAH**		10.0	< 10.0	
Surr: Terphenyl-d14	1718-51-0	10-199	**89.8**	

*** - This value is a summation of the PAH compounds listed above.*

ORGANIC ANALYTICAL REPORT

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Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-002B
Client Sample ID: RB NR Greenhouse 4992088
Collection Date: 12/6/2010 1545h
Analyzed: 12/7/2010 2039h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: SW8270D

Analytical Results SVOA Fractionation by GC/MS Method 8270D/3510C

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Acenaphthene	83-32-9	10.5	< 10.5	
Acenaphthylene	208-96-8	10.5	< 10.5	
Anthracene	120-12-7	10.5	< 10.5	
Benz(a)anthracene	56-55-3	10.5	< 10.5	
Benzo(a)pyrene	50-32-8	10.5	< 10.5	
Benzo(b)fluoranthene	205-99-2	10.5	< 10.5	
Benzo(g,h,i)perylene	191-24-2	10.5	< 10.5	
Benzo(k)fluoranthene	207-08-9	10.5	< 10.5	
Chrysene	218-01-9	10.5	< 10.5	
Dibenz(a,h)anthracene	53-70-3	10.5	< 10.5	
Fluoranthene	206-44-0	10.5	< 10.5	
Fluorene	86-73-7	10.5	< 10.5	
Indeno(1,2,3-cd)pyrene	193-39-5	10.5	< 10.5	
Phenanthrene	85-01-8	10.5	< 10.5	
Pyrene	129-00-0	10.5	< 10.5	
C11-C12 Aliphatic hydrocarbons		10.5	< 10.5	
C13-C16 Aliphatic hydrocarbons		10.5	< 10.5	
C17-C21 Aliphatic hydrocarbons		10.5	< 10.5	
C22-C35 Aliphatic hydrocarbons		10.5	< 10.5	
C11-C13 Alkyl Naphthalenes		10.5	< 10.5	
Total C12-C22 PAH**		10.5	< 10.5	
Surr: Terphenyl-d14	1718-51-0	10-199	**83.2**	

*** - This value is a summation of the PAH compounds listed above.*

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-003B
Client Sample ID: RB @ Foothill 4992086
Collection Date: 12/6/2010 1615h
Analyzed: 12/7/2010 2203h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: SW8270D

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Salt Lake City, UT
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Analytical Results — SVOA Fractionation by GC/MS Method 8270D/3510C

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	
Fluorene	86-73-7	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
C11-C12 Aliphatic hydrocarbons		10.0	< 10.0	
C13-C16 Aliphatic hydrocarbons		10.0	< 10.0	
C17-C21 Aliphatic hydrocarbons		10.0	< 10.0	
C22-C35 Aliphatic hydrocarbons		10.0	< 10.0	
C11-C13 Alkyl Naphthalenes		10.0	< 10.0	
Total C12-C22 PAH**		10.0	< 10.0	
Surr: Terphenyl-d14	1718-51-0	10-199	**86.8**	

*** - This value is a summation of the PAH compounds listed above.*

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-004B
Client Sample ID: RB @ Miller Pk 4992084
Collection Date: 12/6/2010 1640h
Analyzed: 12/7/2010 2230h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: SW8270D

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Analytical Results SVOA Fractionation by GC/MS Method 8270D/3510C

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	
Fluorene	86-73-7	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
C11-C12 Aliphatic hydrocarbons		10.0	< 10.0	
C13-C16 Aliphatic hydrocarbons		10.0	< 10.0	
C17-C21 Aliphatic hydrocarbons		10.0	< 10.0	
C22-C35 Aliphatic hydrocarbons		10.0	< 10.0	
C11-C13 Alkyl Naphthalenes		10.0	< 10.0	
Total C12-C22 PAH**		10.0	< 10.0	
Surr: Terphenyl-d14	1718-51-0	10-199	**96.4**	

*** - This value is a summation of the PAH compounds listed above.*

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-005B
Client Sample ID: RB @ 1100 E. 4992083
Collection Date: 12/6/2010 1700h
Analyzed: 12/7/2010 2258h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: SW8270D

AMERICAN WEST ANALYTICAL LABORATORIES

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

Analytical Results SVOA Fractionation by GC/MS Method 8270D/3510C

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	
Fluorene	86-73-7	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
C11-C12 Aliphatic hydrocarbons		10.0	< 10.0	
C13-C16 Aliphatic hydrocarbons		10.0	< 10.0	
C17-C21 Aliphatic hydrocarbons		10.0	< 10.0	
C22-C35 Aliphatic hydrocarbons		10.0	< 10.0	
C11-C13 Alkyl Naphthalenes		10.0	< 10.0	
Total C12-C22 PAH**		10.0	< 10.0	
Surr: Terphenyl-d14	1718-51-0	10-199	**87.3**	

*** - This value is a summation of the PAH compounds listed above.*

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-001B
Client Sample ID: RB AB Gardens 4992095
Collection Date: 12/6/2010 1515h
Analyzed: 12/7/2010 2011h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	10.0	< 10.0	
1,2,4,5-Tetrachlorobenzene	95-94-3	10.0	< 10.0	
1,2,4-Trichlorobenzene	120-82-1	10.0	< 10.0	
1,2-Dichlorobenzene	95-50-1	10.0	< 10.0	
1,3,5-Trinitrobenzene	99-35-4	10.0	< 10.0	
1,4-Naphthoquinone	130-15-4	10.0	< 10.0	
1,3-Dichlorobenzene	541-73-1	10.0	< 10.0	
1,3-Dinitrobenzene	99-65-0	10.0	< 10.0	
1,4-Dichlorobenzene	106-46-7	10.0	< 10.0	
1,4-Phenylenediamine	106-50-3	10.0	< 10.0	
1-Chloronaphthalene	90-13-1	10.0	< 10.0	
1-Methylnaphthalene	90-12-0	10.0	< 10.0	
1-Naphthylamine	134-32-7	10.0	< 10.0	
2,3,4,6-Tetrachlorophenol	58-90-2	10.0	< 10.0	
2,4,5-Trichlorophenol	95-95-4	10.0	< 10.0	
2,4,6-Trichlorophenol	88-06-2	10.0	< 10.0	
2,4-Dichlorophenol	120-83-2	10.0	< 10.0	
2,4-Dimethylphenol	105-67-9	10.0	< 10.0	
2,4-Dinitrophenol	51-28-5	20.0	< 20.0	
2,4-Dinitrotoluene	121-14-2	10.0	< 10.0	
2,6-Dichlorophenol	87-65-0	10.0	< 10.0	
2,6-Dinitrotoluene	606-20-2	10.0	< 10.0	
2-Acetylaminofluorene	53-96-3	10.0	< 10.0	
2-Chloronaphthalene	91-58-7	10.0	< 10.0	
2-Chlorophenol	95-57-8	10.0	< 10.0	
2-Methylnaphthalene	91-57-6	10.0	< 10.0	
2-Methylphenol	95-48-7	10.0	< 10.0	
2-Naphthylamine	91-59-8	10.0	< 10.0	
2-Nitroaniline	88-74-4	10.0	< 10.0	

AMERICAN WEST ANALYTICAL LABORATORIES

463 West 3600 South
Salt Lake City, UT
84115

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

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

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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

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-001B
Client Sample ID: RB AB Gardens 4992095
Collection Date: 12/6/2010 1515h
Analyzed: 12/7/2010 2011h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Nitrophenol	88-75-5	10.0	< 10.0	
2-Picoline	109-06-8	10.0	< 10.0	
3&4-Methylphenol		10.0	< 10.0	
3,3´-Dichlorobenzidine	91-94-1	10.0	< 10.0	
3,3´-Dimethylbenzidine	119-93-7	10.0	< 10.0	
3-Methylcholanthrene	56-49-5	10.0	< 10.0	
3-Nitroaniline	99-09-2	10.0	< 10.0	
4,6-Dinitro-2-methylphenol	534-52-1	10.0	< 10.0	
4-Aminobiphenyl	92-67-1	10.0	< 10.0	
4-Bromophenyl phenyl ether	101-55-3	10.0	< 10.0	
4-Chloro-3-methylphenol	59-50-7	10.0	< 10.0	
4-Chloroaniline	106-47-8	10.0	< 10.0	
4-Chlorophenyl phenyl ether	7005-72-3	10.0	< 10.0	
4-Nitroaniline	100-01-6	10.0	< 10.0	
4-Nitrophenol	100-02-7	10.0	< 10.0	
5-Nitro-o-toluidine	99-55-8	10.0	< 10.0	
7,12-Dimethylbenz(a)anthracene	57-97-6	10.0	< 10.0	
a,a-Dimethylphenethylamine	122-09-8	10.0	< 10.0	
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Acetophenone	98-86-2	10.0	< 10.0	
alpha-Terpineol	98-55-5	10.0	< 10.0	
Aniline	62-53-3	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Aramite	140-57-8	10.0	< 10.0	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	
Benzidine	92-87-5	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-001B
Client Sample ID: RB AB Gardens 4992095
Collection Date: 12/6/2010 1515h
Analyzed: 12/7/2010 2011h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

AMERICAN WEST ANALYTICAL LABORATORIES

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

Analytical Results — SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Benzoic acid	65-85-0	20.0	< 20.0	
Benzyl alcohol	100-51-6	10.0	< 10.0	
Bis(2-chloroethoxy)methane	111-91-1	10.0	< 10.0	
Bis(2-chloroethyl) ether	111-44-4	10.0	< 10.0	
Bis(2-chloroisopropyl) ether	108-60-1	10.0	< 10.0	
Bis(2-ethylhexyl) phthalate	117-81-7	10.0	< 10.0	
bis(2-ethylhexyl)adipate	103-23-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	10.0	< 10.0	
Carbazole	86-74-8	10.0	< 10.0	
Chlorobenzilate	510-15-6	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Di-n-butyl phthalate	84-74-2	10.0	< 10.0	
Di-n-octyl phthalate	117-84-0	10.0	< 10.0	
Diallate (cis or trans)	2303-16-4	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Dibenzofuran	132-64-9	10.0	< 10.0	
Diethyl phthalate	84-66-2	10.0	< 10.0	
Dimethoate	60-51-5	10.0	< 10.0	
Dimethyl phthalate	131-11-3	10.0	< 10.0	
Dimethylaminoazobenzene	60-11-7	10.0	< 10.0	
Dinoseb	88-85-7	10.0	< 10.0	
Diphenylamine	122-39-4	10.0	< 10.0	
Disulfoton	298-04-4	10.0	< 10.0	
Ethyl methanesulfonate	62-50-0	10.0	< 10.0	
Famphur	52-85-7	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-001B
Client Sample ID: RB AB Gardens 4992095
Collection Date: 12/6/2010 1515h
Analyzed: 12/7/2010 2011h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Fluorene	86-73-7	10.0	< 10.0	
Hexachlorobenzene	118-74-1	10.0	< 10.0	
Hexachlorobutadiene	87-68-3	10.0	< 10.0	
Hexachlorocyclopentadiene	77-47-4	10.0	< 10.0	
Hexachloroethane	67-72-1	10.0	< 10.0	
Hexachlorophene	70-30-4	10.0	< 10.0	
Hexachloropropene	1888-71-7	10.0	< 10.0	
Indene	95-13-6	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Isodrin	465-73-6	10.0	< 10.0	
Isophorone	78-59-1	10.0	< 10.0	
Isosafrole	120-58-1	10.0	< 10.0	
Kepone	143-50-0	10.0	< 10.0	
Methapyrilene	91-80-5	10.0	< 10.0	
Methyl methanesulfonate	66-27-3	10.0	< 10.0	
n-Decane	124-18-5	10.0	< 10.0	
N-Nitrosodi-n-butylamine	924-16-3	10.0	< 10.0	
N-Nitrosodiethylamine	55-18-5	10.0	< 10.0	
N-Nitrosodimethylamine	62-75-9	10.0	< 10.0	
N-Nitrosodiphenylamine	86-30-6	10.0	< 10.0	
N-Nitrosodi-n-propylamine	621-64-7	10.0	< 10.0	
N-Nitrosomethylethylamine	10595-95-6	10.0	< 10.0	
N-Nitrosomorpholine	59-89-2	10.0	< 10.0	
N-Nitrosopiperidine	100-75-4	10.0	< 10.0	
N-Nitrosopyrrolidine	930-55-2	10.0	< 10.0	
n-Octadecane	593-45-3	10.0	< 10.0	
Naphthalene	91-20-3	10.0	< 10.0	
Nitrobenzene	98-95-3	10.0	< 10.0	
Nitroquinoline-1-oxide	56-57-5	10.0	< 10.0	

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Salt Lake City, UT
84115

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email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-001B
Client Sample ID: RB AB Gardens 4992095
Collection Date: 12/6/2010 1515h
Analyzed: 12/7/2010 2011h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
O,O,O-Triethyl phosphorothioate	126-68-1	10.0	< 10.0	
o-Toluidine	95-53-4	10.0	< 10.0	
Parathion	56-38-2	10.0	< 10.0	
Methyl parathion	298-00-0	10.0	< 10.0	
Pentachlorobenzene	608-93-5	10.0	< 10.0	
Pentachloronitrobenzene	82-68-8	10.0	< 10.0	
Pentachlorophenol	87-86-5	10.0	< 10.0	
Phenacetin	62-44-2	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Phenol	108-95-2	10.0	< 10.0	
Phorate	298-02-2	10.0	< 10.0	
Pronamide	23950-58-5	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
Pyridine	110-86-1	10.0	< 10.0	~
Quinoline	91-22-5	10.0	< 10.0	
Safrole	94-59-7	10.0	< 10.0	
Tetraethyl dithiopyrophosphate	3689-24-5	10.0	< 10.0	
Thionazin	297-97-2	10.0	< 10.0	
Surr: 2,4,6-Tribromophenol	118-79-6	10-159	**69.5**	
Surr: 2-Fluorobiphenyl	321-60-8	10-124	**78.7**	
Surr: 2-Fluorophenol	367-12-4	10-106	**30.0**	
Surr: Nitrobenzene-d5	4165-60-0	10-180	**51.2**	
Surr: Phenol-d6	13127-88-3	10-122	**36.0**	
Surr: Terphenyl-d14	1718-51-0	10-199	**89.8**	

~ - LCS outliers are not target compounds for method 625 but are provided by AWAL as an additional service.
The sample was analyzed for TICs. Those results can be found on pages 130 to 131.

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463 West 3600 South
Salt Lake City, UT
84115

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Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-002B
Client Sample ID: RB NR Greenhouse 4992088
Collection Date: 12/6/2010 1545h
Analyzed: 12/7/2010 2039h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

AMERICAN WEST ANALYTICAL LABORATORIES

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

Analytical Results — SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	10.5	< 10.5	
1,2,4,5-Tetrachlorobenzene	95-94-3	10.5	< 10.5	
1,2,4-Trichlorobenzene	120-82-1	10.5	< 10.5	
1,2-Dichlorobenzene	95-50-1	10.5	< 10.5	
1,3,5-Trinitrobenzene	99-35-4	10.5	< 10.5	1
1,4-Naphthoquinone	130-15-4	10.5	< 10.5	
1,3-Dichlorobenzene	541-73-1	10.5	< 10.5	
1,3-Dinitrobenzene	99-65-0	10.5	< 10.5	
1,4-Dichlorobenzene	106-46-7	10.5	< 10.5	
1,4-Phenylenediamine	106-50-3	10.5	< 10.5	
1-Chloronaphthalene	90-13-1	10.5	< 10.5	
1-Methylnaphthalene	90-12-0	10.5	< 10.5	
1-Naphthylamine	134-32-7	10.5	< 10.5	
2,3,4,6-Tetrachlorophenol	58-90-2	10.5	< 10.5	
2,4,5-Trichlorophenol	95-95-4	10.5	< 10.5	
2,4,6-Trichlorophenol	88-06-2	10.5	< 10.5	
2,4-Dichlorophenol	120-83-2	10.5	< 10.5	
2,4-Dimethylphenol	105-67-9	10.5	< 10.5	
2,4-Dinitrophenol	51-28-5	21.1	< 21.1	
2,4-Dinitrotoluene	121-14-2	10.5	< 10.5	
2,6-Dichlorophenol	87-65-0	10.5	< 10.5	
2,6-Dinitrotoluene	606-20-2	10.5	< 10.5	
2-Acetylaminofluorene	53-96-3	10.5	< 10.5	
2-Chloronaphthalene	91-58-7	10.5	< 10.5	
2-Chlorophenol	95-57-8	10.5	< 10.5	
2-Methylnaphthalene	91-57-6	10.5	< 10.5	
2-Methylphenol	95-48-7	10.5	< 10.5	
2-Naphthylamine	91-59-8	10.5	< 10.5	
2-Nitroaniline	88-74-4	10.5	< 10.5	

ORGANIC ANALYTICAL REPORT

AMERICAN WEST ANALYTICAL LABORATORIES

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Salt Lake City, UT
84115

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email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Client: Utah DEQ DERR **Contact:** Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-002B
Client Sample ID: RB NR Greenhouse 4992088
Collection Date: 12/6/2010 1545h **Analyzed:** 12/7/2010 2039h
Received Date: 12/6/2010 1732h **Extracted:** 12/7/2010 1059h
Method Used: EPA625

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Nitrophenol	88-75-5	10.5	< 10.5	
2-Picoline	109-06-8	10.5	< 10.5	
3&4-Methylphenol		10.5	< 10.5	
3,3´-Dichlorobenzidine	91-94-1	10.5	< 10.5	
3,3´-Dimethylbenzidine	119-93-7	10.5	< 10.5	
3-Methylcholanthrene	56-49-5	10.5	< 10.5	
3-Nitroaniline	99-09-2	10.5	< 10.5	
4,6-Dinitro-2-methylphenol	534-52-1	10.5	< 10.5	
4-Aminobiphenyl	92-67-1	10.5	< 10.5	
4-Bromophenyl phenyl ether	101-55-3	10.5	< 10.5	
4-Chloro-3-methylphenol	59-50-7	10.5	< 10.5	
4-Chloroaniline	106-47-8	10.5	< 10.5	
4-Chlorophenyl phenyl ether	7005-72-3	10.5	< 10.5	
4-Nitroaniline	100-01-6	10.5	< 10.5	
4-Nitrophenol	100-02-7	10.5	< 10.5	
5-Nitro-o-toluidine	99-55-8	10.5	< 10.5	
7,12-Dimethylbenz(a)anthracene	57-97-6	10.5	< 10.5	
a,a-Dimethylphenethylamine	122-09-8	10.5	< 10.5	
Acenaphthene	83-32-9	10.5	< 10.5	
Acenaphthylene	208-96-8	10.5	< 10.5	
Acetophenone	98-86-2	10.5	< 10.5	
alpha-Terpineol	98-55-5	10.5	< 10.5	1
Aniline	62-53-3	10.5	< 10.5	
Anthracene	120-12-7	10.5	< 10.5	
Aramite	140-57-8	10.5	< 10.5	
Azobenzene	103-33-3	10.5	< 10.5	
Benz(a)anthracene	56-55-3	10.5	< 10.5	
Benzidine	92-87-5	10.5	< 10.5	
Benzo(a)pyrene	50-32-8	10.5	< 10.5	

ORGANIC ANALYTICAL REPORT

AMERICAN WEST ANALYTICAL LABORATORIES

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

Client: Utah DEQ DERR **Contact:** Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-002B
Client Sample ID: RB NR Greenhouse 4992088
Collection Date: 12/6/2010 1545h **Analyzed:** 12/7/2010 2039h
Received Date: 12/6/2010 1732h **Extracted:** 12/7/2010 1059h
Method Used: EPA625

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzo(b)fluoranthene	205-99-2	10.5	< 10.5	
Benzo(g,h,i)perylene	191-24-2	10.5	< 10.5	
Benzo(k)fluoranthene	207-08-9	10.5	< 10.5	
Benzoic acid	65-85-0	21.1	< 21.1	
Benzyl alcohol	100-51-6	10.5	< 10.5	
Bis(2-chloroethoxy)methane	111-91-1	10.5	< 10.5	
Bis(2-chloroethyl) ether	111-44-4	10.5	< 10.5	
Bis(2-chloroisopropyl) ether	108-60-1	10.5	< 10.5	
Bis(2-ethylhexyl) phthalate	117-81-7	10.5	< 10.5	
bis(2-ethylhexyl)adipate	103-23-1	10.5	< 10.5	
Butyl benzyl phthalate	85-68-7	10.5	< 10.5	
Carbazole	86-74-8	10.5	< 10.5	
Chlorobenzilate	510-15-6	10.5	< 10.5	
Chrysene	218-01-9	10.5	< 10.5	
Di-n-butyl phthalate	84-74-2	10.5	< 10.5	1
Di-n-octyl phthalate	117-84-0	10.5	< 10.5	
Diallate (cis or trans)	2303-16-4	10.5	< 10.5	
Dibenz(a,h)anthracene	53-70-3	10.5	< 10.5	
Dibenzofuran	132-64-9	10.5	< 10.5	
Diethyl phthalate	84-66-2	10.5	< 10.5	
Dimethoate	60-51-5	10.5	< 10.5	
Dimethyl phthalate	131-11-3	10.5	< 10.5	
Dimethylaminoazobenzene	60-11-7	10.5	< 10.5	
Dinoseb	88-85-7	10.5	< 10.5	1
Diphenylamine	122-39-4	10.5	< 10.5	
Disulfoton	298-04-4	10.5	< 10.5	
Ethyl methanesulfonate	62-50-0	10.5	< 10.5	
Famphur	52-85-7	10.5	< 10.5	1
Fluoranthene	206-44-0	10.5	< 10.5	

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-002B
Client Sample ID: RB NR Greenhouse 4992088
Collection Date: 12/6/2010 1545h
Analyzed: 12/7/2010 2039h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Fluorene	86-73-7	10.5	< 10.5	
Hexachlorobenzene	118-74-1	10.5	< 10.5	
Hexachlorobutadiene	87-68-3	10.5	< 10.5	
Hexachlorocyclopentadiene	77-47-4	10.5	< 10.5	
Hexachloroethane	67-72-1	10.5	< 10.5	
Hexachlorophene	70-30-4	10.5	< 10.5	
Hexachloropropene	1888-71-7	10.5	< 10.5	
Indene	95-13-6	10.5	< 10.5	
Indeno(1,2,3-cd)pyrene	193-39-5	10.5	< 10.5	
Isodrin	465-73-6	10.5	< 10.5	
Isophorone	78-59-1	10.5	< 10.5	
Isosafrole	120-58-1	10.5	< 10.5	
Kepone	143-50-0	10.5	< 10.5	
Methapyrilene	91-80-5	10.5	< 10.5	
Methyl methanesulfonate	66-27-3	10.5	< 10.5	
n-Decane	124-18-5	10.5	< 10.5	
N-Nitrosodi-n-butylamine	924-16-3	10.5	< 10.5	
N-Nitrosodiethylamine	55-18-5	10.5	< 10.5	
N-Nitrosodimethylamine	62-75-9	10.5	< 10.5	
N-Nitrosodiphenylamine	86-30-6	10.5	< 10.5	
N-Nitrosodi-n-propylamine	621-64-7	10.5	< 10.5	
N-Nitrosomethylethylamine	10595-95-6	10.5	< 10.5	
N-Nitrosomorpholine	59-89-2	10.5	< 10.5	
N-Nitrosopiperidine	100-75-4	10.5	< 10.5	
N-Nitrosopyrrolidine	930-55-2	10.5	< 10.5	
n-Octadecane	593-45-3	10.5	< 10.5	
Naphthalene	91-20-3	10.5	< 10.5	
Nitrobenzene	98-95-3	10.5	< 10.5	
Nitroquinoline-1-oxide	56-57-5	10.5	< 10.5	

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QA Officer

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-002B
Client Sample ID: RB NR Greenhouse 4992088
Collection Date: 12/6/2010 1545h
Analyzed: 12/7/2010 2039h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

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463 West 3600 South
Salt Lake City, UT
84115

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Analytical Results — SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
O,O,O-Triethyl phosphorothioate	126-68-1	10.5	< 10.5	
o-Toluidine	95-53-4	10.5	< 10.5	
Parathion	56-38-2	10.5	< 10.5	
Methyl parathion	298-00-0	10.5	< 10.5	
Pentachlorobenzene	608-93-5	10.5	< 10.5	
Pentachloronitrobenzene	82-68-8	10.5	< 10.5	
Pentachlorophenol	87-86-5	10.5	< 10.5	
Phenacetin	62-44-2	10.5	< 10.5	
Phenanthrene	85-01-8	10.5	< 10.5	
Phenol	108-95-2	10.5	< 10.5	
Phorate	298-02-2	10.5	< 10.5	
Pronamide	23950-58-5	10.5	< 10.5	
Pyrene	129-00-0	10.5	< 10.5	
Pyridine	110-86-1	10.5	< 10.5	[1] ~
Quinoline	91-22-5	10.5	< 10.5	[1]
Safrole	94-59-7	10.5	< 10.5	
Tetraethyl dithiopyrophosphate	3689-24-5	10.5	< 10.5	
Thionazin	297-97-2	10.5	< 10.5	
Surr: 2,4,6-Tribromophenol	118-79-6	10-159	**64.6**	
Surr: 2-Fluorobiphenyl	321-60-8	10-124	**66.6**	
Surr: 2-Fluorophenol	367-12-4	10-106	**34.5**	
Surr: Nitrobenzene-d5	4165-60-0	10-180	**39.0**	
Surr: Phenol-d6	13127-88-3	10-122	**32.6**	
Surr: Terphenyl-d14	1718-51-0	10-199	**83.2**	

~ - LCS outliers are not target compounds for method 625 but are provided by AWAL as an additional service.
[1] - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.
This sample was analyzed for TICs and no peaks were detected.

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-003B
Client Sample ID: RB @ Foothill 4992086
Collection Date: 12/6/2010 1615h
Analyzed: 12/7/2010 2203h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	10.0	< 10.0	
1,2,4,5-Tetrachlorobenzene	95-94-3	10.0	< 10.0	
1,2,4-Trichlorobenzene	120-82-1	10.0	< 10.0	
1,2-Dichlorobenzene	95-50-1	10.0	< 10.0	
1,3,5-Trinitrobenzene	99-35-4	10.0	< 10.0	
1,4-Naphthoquinone	130-15-4	10.0	< 10.0	
1,3-Dichlorobenzene	541-73-1	10.0	< 10.0	
1,3-Dinitrobenzene	99-65-0	10.0	< 10.0	
1,4-Dichlorobenzene	106-46-7	10.0	< 10.0	
1,4-Phenylenediamine	106-50-3	10.0	< 10.0	
1-Chloronaphthalene	90-13-1	10.0	< 10.0	
1-Methylnaphthalene	90-12-0	10.0	< 10.0	
1-Naphthylamine	134-32-7	10.0	< 10.0	
2,3,4,6-Tetrachlorophenol	58-90-2	10.0	< 10.0	
2,4,5-Trichlorophenol	95-95-4	10.0	< 10.0	
2,4,6-Trichlorophenol	88-06-2	10.0	< 10.0	
2,4-Dichlorophenol	120-83-2	10.0	< 10.0	
2,4-Dimethylphenol	105-67-9	10.0	< 10.0	
2,4-Dinitrophenol	51-28-5	20.0	< 20.0	
2,4-Dinitrotoluene	121-14-2	10.0	< 10.0	
2,6-Dichlorophenol	87-65-0	10.0	< 10.0	
2,6-Dinitrotoluene	606-20-2	10.0	< 10.0	
2-Acetylaminofluorene	53-96-3	10.0	< 10.0	
2-Chloronaphthalene	91-58-7	10.0	< 10.0	
2-Chlorophenol	95-57-8	10.0	< 10.0	
2-Methylnaphthalene	91-57-6	10.0	< 10.0	
2-Methylphenol	95-48-7	10.0	< 10.0	
2-Naphthylamine	91-59-8	10.0	< 10.0	
2-Nitroaniline	88-74-4	10.0	< 10.0	

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Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-003B
Client Sample ID: RB @ Foothill 4992086
Collection Date: 12/6/2010 1615h
Analyzed: 12/7/2010 2203h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

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463 West 3600 South
Salt Lake City, UT
84115

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Toll Free (888) 263-8686
Fax (801)263-8687
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Kyle F. Gross
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QA Officer

Analytical Results — SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Nitrophenol	88-75-5	10.0	< 10.0	
2-Picoline	109-06-8	10.0	< 10.0	
3&4-Methylphenol		10.0	< 10.0	
3,3´-Dichlorobenzidine	91-94-1	10.0	< 10.0	
3,3´-Dimethylbenzidine	119-93-7	10.0	< 10.0	
3-Methylcholanthrene	56-49-5	10.0	< 10.0	
3-Nitroaniline	99-09-2	10.0	< 10.0	
4,6-Dinitro-2-methylphenol	534-52-1	10.0	< 10.0	
4-Aminobiphenyl	92-67-1	10.0	< 10.0	
4-Bromophenyl phenyl ether	101-55-3	10.0	< 10.0	
4-Chloro-3-methylphenol	59-50-7	10.0	< 10.0	
4-Chloroaniline	106-47-8	10.0	< 10.0	
4-Chlorophenyl phenyl ether	7005-72-3	10.0	< 10.0	
4-Nitroaniline	100-01-6	10.0	< 10.0	
4-Nitrophenol	100-02-7	10.0	< 10.0	
5-Nitro-o-toluidine	99-55-8	10.0	< 10.0	
7,12-Dimethylbenz(a)anthracene	57-97-6	10.0	< 10.0	
a,a-Dimethylphenethylamine	122-09-8	10.0	< 10.0	
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Acetophenone	98-86-2	10.0	< 10.0	
alpha-Terpineol	98-55-5	10.0	< 10.0	
Aniline	62-53-3	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Aramite	140-57-8	10.0	< 10.0	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	
Benzidine	92-87-5	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	

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Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-003B
Client Sample ID: RB @ Foothill 4992086
Collection Date: 12/6/2010 1615h
Analyzed: 12/7/2010 2203h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Benzoic acid	65-85-0	20.0	< 20.0	
Benzyl alcohol	100-51-6	10.0	< 10.0	
Bis(2-chloroethoxy)methane	111-91-1	10.0	< 10.0	
Bis(2-chloroethyl) ether	111-44-4	10.0	< 10.0	
Bis(2-chloroisopropyl) ether	108-60-1	10.0	< 10.0	
Bis(2-ethylhexyl) phthalate	117-81-7	10.0	< 10.0	
bis(2-ethylhexyl)adipate	103-23-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	10.0	< 10.0	
Carbazole	86-74-8	10.0	< 10.0	
Chlorobenzilate	510-15-6	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Di-n-butyl phthalate	84-74-2	10.0	< 10.0	
Di-n-octyl phthalate	117-84-0	10.0	< 10.0	
Diallate (cis or trans)	2303-16-4	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Dibenzofuran	132-64-9	10.0	< 10.0	
Diethyl phthalate	84-66-2	10.0	< 10.0	
Dimethoate	60-51-5	10.0	< 10.0	
Dimethyl phthalate	131-11-3	10.0	< 10.0	
Dimethylaminoazobenzene	60-11-7	10.0	< 10.0	
Dinoseb	88-85-7	10.0	< 10.0	
Diphenylamine	122-39-4	10.0	< 10.0	
Disulfoton	298-04-4	10.0	< 10.0	
Ethyl methanesulfonate	62-50-0	10.0	< 10.0	
Famphur	52-85-7	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-003B
Client Sample ID: RB @ Foothill 4992086
Collection Date: 12/6/2010 1615h
Analyzed: 12/7/2010 2203h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Fluorene	86-73-7	10.0	< 10.0	
Hexachlorobenzene	118-74-1	10.0	< 10.0	
Hexachlorobutadiene	87-68-3	10.0	< 10.0	
Hexachlorocyclopentadiene	77-47-4	10.0	< 10.0	
Hexachloroethane	67-72-1	10.0	< 10.0	
Hexachlorophene	70-30-4	10.0	< 10.0	
Hexachloropropene	1888-71-7	10.0	< 10.0	
Indene	95-13-6	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Isodrin	465-73-6	10.0	< 10.0	
Isophorone	78-59-1	10.0	< 10.0	
Isosafrole	120-58-1	10.0	< 10.0	
Kepone	143-50-0	10.0	< 10.0	
Methapyrilene	91-80-5	10.0	< 10.0	
Methyl methanesulfonate	66-27-3	10.0	< 10.0	
n-Decane	124-18-5	10.0	< 10.0	
N-Nitrosodi-n-butylamine	924-16-3	10.0	< 10.0	
N-Nitrosodiethylamine	55-18-5	10.0	< 10.0	
N-Nitrosodimethylamine	62-75-9	10.0	< 10.0	
N-Nitrosodiphenylamine	86-30-6	10.0	< 10.0	
N-Nitrosodi-n-propylamine	621-64-7	10.0	< 10.0	
N-Nitrosomethylethylamine	10595-95-6	10.0	< 10.0	
N-Nitrosomorpholine	59-89-2	10.0	< 10.0	
N-Nitrosopiperidine	100-75-4	10.0	< 10.0	
N-Nitrosopyrrolidine	930-55-2	10.0	< 10.0	
n-Octadecane	593-45-3	10.0	< 10.0	
Naphthalene	91-20-3	10.0	< 10.0	
Nitrobenzene	98-95-3	10.0	< 10.0	
Nitroquinoline-1-oxide	56-57-5	10.0	< 10.0	

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-003B
Client Sample ID: RB @ Foothill 4992086
Collection Date: 12/6/2010 1615h
Analyzed: 12/7/2010 2203h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
O,O,O-Triethyl phosphorothioate	126-68-1	10.0	< 10.0	
o-Toluidine	95-53-4	10.0	< 10.0	
Parathion	56-38-2	10.0	< 10.0	
Methyl parathion	298-00-0	10.0	< 10.0	
Pentachlorobenzene	608-93-5	10.0	< 10.0	
Pentachloronitrobenzene	82-68-8	10.0	< 10.0	
Pentachlorophenol	87-86-5	10.0	< 10.0	
Phenacetin	62-44-2	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Phenol	108-95-2	10.0	< 10.0	
Phorate	298-02-2	10.0	< 10.0	
Pronamide	23950-58-5	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
Pyridine	110-86-1	10.0	< 10.0	~
Quinoline	91-22-5	10.0	< 10.0	
Safrole	94-59-7	10.0	< 10.0	
Tetraethyl dithiopyrophosphate	3689-24-5	10.0	< 10.0	
Thionazin	297-97-2	10.0	< 10.0	
Surr: 2,4,6-Tribromophenol	118-79-6	10-159	**71.1**	
Surr: 2-Fluorobiphenyl	321-60-8	10-124	**43.5**	
Surr: 2-Fluorophenol	367-12-4	10-106	**28.0**	
Surr: Nitrobenzene-d5	4165-60-0	10-180	**27.4**	
Surr: Phenol-d6	13127-88-3	10-122	**31.5**	
Surr: Terphenyl-d14	1718-51-0	10-199	**86.8**	

~ - LCS outliers are not target compounds for method 625 but are provided by AWAL as an additional service.
The sample was analyzed for TICs. Those results can be found on pages 130 to 131.

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-004B
Client Sample ID: RB @ Miller Pk 4992084
Collection Date: 12/6/2010 1640h
Analyzed: 12/7/2010 2230h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	10.0	< 10.0	
1,2,4,5-Tetrachlorobenzene	95-94-3	10.0	< 10.0	
1,2,4-Trichlorobenzene	120-82-1	10.0	< 10.0	
1,2-Dichlorobenzene	95-50-1	10.0	< 10.0	
1,3,5-Trinitrobenzene	99-35-4	10.0	< 10.0	
1,4-Naphthoquinone	130-15-4	10.0	< 10.0	
1,3-Dichlorobenzene	541-73-1	10.0	< 10.0	
1,3-Dinitrobenzene	99-65-0	10.0	< 10.0	
1,4-Dichlorobenzene	106-46-7	10.0	< 10.0	
1,4-Phenylenediamine	106-50-3	10.0	< 10.0	
1-Chloronaphthalene	90-13-1	10.0	< 10.0	
1-Methylnaphthalene	90-12-0	10.0	< 10.0	
1-Naphthylamine	134-32-7	10.0	< 10.0	
2,3,4,6-Tetrachlorophenol	58-90-2	10.0	< 10.0	
2,4,5-Trichlorophenol	95-95-4	10.0	< 10.0	
2,4,6-Trichlorophenol	88-06-2	10.0	< 10.0	
2,4-Dichlorophenol	120-83-2	10.0	< 10.0	
2,4-Dimethylphenol	105-67-9	10.0	< 10.0	
2,4-Dinitrophenol	51-28-5	20.0	< 20.0	
2,4-Dinitrotoluene	121-14-2	10.0	< 10.0	
2,6-Dichlorophenol	87-65-0	10.0	< 10.0	
2,6-Dinitrotoluene	606-20-2	10.0	< 10.0	
2-Acetylaminofluorene	53-96-3	10.0	< 10.0	
2-Chloronaphthalene	91-58-7	10.0	< 10.0	
2-Chlorophenol	95-57-8	10.0	< 10.0	
2-Methylnaphthalene	91-57-6	10.0	< 10.0	
2-Methylphenol	95-48-7	10.0	< 10.0	
2-Naphthylamine	91-59-8	10.0	< 10.0	
2-Nitroaniline	88-74-4	10.0	< 10.0	

AMERICAN WEST ANALYTICAL LABORATORIES

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

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-004B
Client Sample ID: RB @ Miller Pk 4992084
Collection Date: 12/6/2010 1640h
Analyzed: 12/7/2010 2230h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Nitrophenol	88-75-5	10.0	< 10.0	
2-Picoline	109-06-8	10.0	< 10.0	
3&4-Methylphenol		10.0	< 10.0	
3,3´-Dichlorobenzidine	91-94-1	10.0	< 10.0	
3,3´-Dimethylbenzidine	119-93-7	10.0	< 10.0	
3-Methylcholanthrene	56-49-5	10.0	< 10.0	
3-Nitroaniline	99-09-2	10.0	< 10.0	
4,6-Dinitro-2-methylphenol	534-52-1	10.0	< 10.0	
4-Aminobiphenyl	92-67-1	10.0	< 10.0	
4-Bromophenyl phenyl ether	101-55-3	10.0	< 10.0	
4-Chloro-3-methylphenol	59-50-7	10.0	< 10.0	
4-Chloroaniline	106-47-8	10.0	< 10.0	
4-Chlorophenyl phenyl ether	7005-72-3	10.0	< 10.0	
4-Nitroaniline	100-01-6	10.0	< 10.0	
4-Nitrophenol	100-02-7	10.0	< 10.0	
5-Nitro-o-toluidine	99-55-8	10.0	< 10.0	
7,12-Dimethylbenz(a)anthracene	57-97-6	10.0	< 10.0	
a,a-Dimethylphenethylamine	122-09-8	10.0	< 10.0	
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Acetophenone	98-86-2	10.0	< 10.0	
alpha-Terpineol	98-55-5	10.0	< 10.0	
Aniline	62-53-3	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Aramite	140-57-8	10.0	< 10.0	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	
Benzidine	92-87-5	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	

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Salt Lake City, UT
84115

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-004B
Client Sample ID: RB @ Miller Pk 4992084
Collection Date: 12/6/2010 1640h
Analyzed: 12/7/2010 2230h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

Analytical Results — SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Benzoic acid	65-85-0	20.0	< 20.0	
Benzyl alcohol	100-51-6	10.0	< 10.0	
Bis(2-chloroethoxy)methane	111-91-1	10.0	< 10.0	
Bis(2-chloroethyl) ether	111-44-4	10.0	< 10.0	
Bis(2-chloroisopropyl) ether	108-60-1	10.0	< 10.0	
Bis(2-ethylhexyl) phthalate	117-81-7	10.0	< 10.0	
bis(2-ethylhexyl)adipate	103-23-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	10.0	< 10.0	
Carbazole	86-74-8	10.0	< 10.0	
Chlorobenzilate	510-15-6	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Di-n-butyl phthalate	84-74-2	10.0	< 10.0	
Di-n-octyl phthalate	117-84-0	10.0	< 10.0	
Diallate (cis or trans)	2303-16-4	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Dibenzofuran	132-64-9	10.0	< 10.0	
Diethyl phthalate	84-66-2	10.0	< 10.0	
Dimethoate	60-51-5	10.0	< 10.0	
Dimethyl phthalate	131-11-3	10.0	< 10.0	
Dimethylaminoazobenzene	60-11-7	10.0	< 10.0	
Dinoseb	88-85-7	10.0	< 10.0	
Diphenylamine	122-39-4	10.0	< 10.0	
Disulfoton	298-04-4	10.0	< 10.0	
Ethyl methanesulfonate	62-50-0	10.0	< 10.0	
Famphur	52-85-7	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	

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Salt Lake City, UT
84115

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Laboratory Director

Jose Rocha
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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-004B
Client Sample ID: RB @ Miller Pk 4992084
Collection Date: 12/6/2010 1640h
Analyzed: 12/7/2010 2230h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Fluorene	86-73-7	10.0	< 10.0	
Hexachlorobenzene	118-74-1	10.0	< 10.0	
Hexachlorobutadiene	87-68-3	10.0	< 10.0	
Hexachlorocyclopentadiene	77-47-4	10.0	< 10.0	
Hexachloroethane	67-72-1	10.0	< 10.0	
Hexachlorophene	70-30-4	10.0	< 10.0	
Hexachloropropene	1888-71-7	10.0	< 10.0	
Indene	95-13-6	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Isodrin	465-73-6	10.0	< 10.0	
Isophorone	78-59-1	10.0	< 10.0	
Isosafrole	120-58-1	10.0	< 10.0	
Kepone	143-50-0	10.0	< 10.0	
Methapyrilene	91-80-5	10.0	< 10.0	
Methyl methanesulfonate	66-27-3	10.0	< 10.0	
n-Decane	124-18-5	10.0	< 10.0	
N-Nitrosodi-n-butylamine	924-16-3	10.0	< 10.0	
N-Nitrosodiethylamine	55-18-5	10.0	< 10.0	
N-Nitrosodimethylamine	62-75-9	10.0	< 10.0	
N-Nitrosodiphenylamine	86-30-6	10.0	< 10.0	
N-Nitrosodi-n-propylamine	621-64-7	10.0	< 10.0	
N-Nitrosomethylethylamine	10595-95-6	10.0	< 10.0	
N-Nitrosomorpholine	59-89-2	10.0	< 10.0	
N-Nitrosopiperidine	100-75-4	10.0	< 10.0	
N-Nitrosopyrrolidine	930-55-2	10.0	< 10.0	
n-Octadecane	593-45-3	10.0	< 10.0	
Naphthalene	91-20-3	10.0	< 10.0	
Nitrobenzene	98-95-3	10.0	< 10.0	
Nitroquinoline-1-oxide	56-57-5	10.0	< 10.0	

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-004B
Client Sample ID: RB @ Miller Pk 4992084
Collection Date: 12/6/2010 1640h
Analyzed: 12/7/2010 2230h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

Analytical Results — SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
O,O,O-Triethyl phosphorothioate	126-68-1	10.0	< 10.0	
o-Toluidine	95-53-4	10.0	< 10.0	
Parathion	56-38-2	10.0	< 10.0	
Methyl parathion	298-00-0	10.0	< 10.0	
Pentachlorobenzene	608-93-5	10.0	< 10.0	
Pentachloronitrobenzene	82-68-8	10.0	< 10.0	
Pentachlorophenol	87-86-5	10.0	< 10.0	
Phenacetin	62-44-2	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Phenol	108-95-2	10.0	< 10.0	
Phorate	298-02-2	10.0	< 10.0	
Pronamide	23950-58-5	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
Pyridine	110-86-1	10.0	< 10.0	~
Quinoline	91-22-5	10.0	< 10.0	
Safrole	94-59-7	10.0	< 10.0	
Tetraethyl dithiopyrophosphate	3689-24-5	10.0	< 10.0	
Thionazin	297-97-2	10.0	< 10.0	
Surr: 2,4,6-Tribromophenol	118-79-6	10-159	**74.8**	
Surr: 2-Fluorobiphenyl	321-60-8	10-124	**52.9**	
Surr: 2-Fluorophenol	367-12-4	10-106	**29.1**	
Surr: Nitrobenzene-d5	4165-60-0	10-180	**36.7**	
Surr: Phenol-d6	13127-88-3	10-122	**32.5**	
Surr: Terphenyl-d14	1718-51-0	10-199	**96.4**	

~ - LCS outliers are not target compounds for method 625 but are provided by AWAL as an additional service.
This sample was analyzed for TICs and no peaks were detected.

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Salt Lake City, UT
84115

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-005B
Client Sample ID: RB @ 1100 E. 4992083
Collection Date: 12/6/2010 1700h
Analyzed: 12/7/2010 2258h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

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463 West 3600 South
Salt Lake City, UT
84115

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Fax (801)263-8687
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Kyle F. Gross
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Analytical Results — SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	10.0	< 10.0	
1,2,4,5-Tetrachlorobenzene	95-94-3	10.0	< 10.0	
1,2,4-Trichlorobenzene	120-82-1	10.0	< 10.0	
1,2-Dichlorobenzene	95-50-1	10.0	< 10.0	
1,3,5-Trinitrobenzene	99-35-4	10.0	< 10.0	
1,4-Naphthoquinone	130-15-4	10.0	< 10.0	
1,3-Dichlorobenzene	541-73-1	10.0	< 10.0	
1,3-Dinitrobenzene	99-65-0	10.0	< 10.0	
1,4-Dichlorobenzene	106-46-7	10.0	< 10.0	
1,4-Phenylenediamine	106-50-3	10.0	< 10.0	
1-Chloronaphthalene	90-13-1	10.0	< 10.0	
1-Methylnaphthalene	90-12-0	10.0	< 10.0	
1-Naphthylamine	134-32-7	10.0	< 10.0	
2,3,4,6-Tetrachlorophenol	58-90-2	10.0	< 10.0	
2,4,5-Trichlorophenol	95-95-4	10.0	< 10.0	
2,4,6-Trichlorophenol	88-06-2	10.0	< 10.0	
2,4-Dichlorophenol	120-83-2	10.0	< 10.0	
2,4-Dimethylphenol	105-67-9	10.0	< 10.0	
2,4-Dinitrophenol	51-28-5	20.0	< 20.0	
2,4-Dinitrotoluene	121-14-2	10.0	< 10.0	
2,6-Dichlorophenol	87-65-0	10.0	< 10.0	
2,6-Dinitrotoluene	606-20-2	10.0	< 10.0	
2-Acetylaminofluorene	53-96-3	10.0	< 10.0	
2-Chloronaphthalene	91-58-7	10.0	< 10.0	
2-Chlorophenol	95-57-8	10.0	< 10.0	
2-Methylnaphthalene	91-57-6	10.0	< 10.0	
2-Methylphenol	95-48-7	10.0	< 10.0	
2-Naphthylamine	91-59-8	10.0	< 10.0	
2-Nitroaniline	88-74-4	10.0	< 10.0	

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Salt Lake City, UT
84115

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Laboratory Director

Jose Rocha
QA Officer

Client: Utah DEQ DERR **Contact:** Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-005B
Client Sample ID: RB @ 1100 E. 4992083
Collection Date: 12/6/2010 1700h **Analyzed:** 12/7/2010 2258h
Received Date: 12/6/2010 1732h **Extracted:** 12/7/2010 1059h
Method Used: EPA625

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Nitrophenol	88-75-5	10.0	< 10.0	
2-Picoline	109-06-8	10.0	< 10.0	
3&4-Methylphenol		10.0	< 10.0	
3,3´-Dichlorobenzidine	91-94-1	10.0	< 10.0	
3,3´-Dimethylbenzidine	119-93-7	10.0	< 10.0	
3-Methylcholanthrene	56-49-5	10.0	< 10.0	
3-Nitroaniline	99-09-2	10.0	< 10.0	
4,6-Dinitro-2-methylphenol	534-52-1	10.0	< 10.0	
4-Aminobiphenyl	92-67-1	10.0	< 10.0	
4-Bromophenyl phenyl ether	101-55-3	10.0	< 10.0	
4-Chloro-3-methylphenol	59-50-7	10.0	< 10.0	
4-Chloroaniline	106-47-8	10.0	< 10.0	
4-Chlorophenyl phenyl ether	7005-72-3	10.0	< 10.0	
4-Nitroaniline	100-01-6	10.0	< 10.0	
4-Nitrophenol	100-02-7	10.0	< 10.0	
5-Nitro-o-toluidine	99-55-8	10.0	< 10.0	
7,12-Dimethylbenz(a)anthracene	57-97-6	10.0	< 10.0	
a,a-Dimethylphenethylamine	122-09-8	10.0	< 10.0	
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Acetophenone	98-86-2	10.0	< 10.0	
alpha-Terpineol	98-55-5	10.0	< 10.0	
Aniline	62-53-3	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Aramite	140-57-8	10.0	< 10.0	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	
Benzidine	92-87-5	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	

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Salt Lake City, UT
84115

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Kyle F. Gross
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Jose Rocha
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Client: Utah DEQ DERR **Contact:** Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-005B
Client Sample ID: RB @ 1100 E. 4992083
Collection Date: 12/6/2010 1700h **Analyzed:** 12/7/2010 2258h
Received Date: 12/6/2010 1732h **Extracted:** 12/7/2010 1059h
Method Used: EPA625

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Benzoic acid	65-85-0	20.0	< 20.0	
Benzyl alcohol	100-51-6	10.0	< 10.0	
Bis(2-chloroethoxy)methane	111-91-1	10.0	< 10.0	
Bis(2-chloroethyl) ether	111-44-4	10.0	< 10.0	
Bis(2-chloroisopropyl) ether	108-60-1	10.0	< 10.0	
Bis(2-ethylhexyl) phthalate	117-81-7	10.0	< 10.0	
bis(2-ethylhexyl)adipate	103-23-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	10.0	< 10.0	
Carbazole	86-74-8	10.0	< 10.0	
Chlorobenzilate	510-15-6	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Di-n-butyl phthalate	84-74-2	10.0	< 10.0	
Di-n-octyl phthalate	117-84-0	10.0	< 10.0	
Diallate (cis or trans)	2303-16-4	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Dibenzofuran	132-64-9	10.0	< 10.0	
Diethyl phthalate	84-66-2	10.0	< 10.0	
Dimethoate	60-51-5	10.0	< 10.0	
Dimethyl phthalate	131-11-3	10.0	< 10.0	
Dimethylaminoazobenzene	60-11-7	10.0	< 10.0	
Dinoseb	88-85-7	10.0	< 10.0	
Diphenylamine	122-39-4	10.0	< 10.0	
Disulfoton	298-04-4	10.0	< 10.0	
Ethyl methanesulfonate	62-50-0	10.0	< 10.0	
Famphur	52-85-7	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-005B
Client Sample ID: RB @ 1100 E. 4992083
Collection Date: 12/6/2010 1700h
Analyzed: 12/7/2010 2258h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Fluorene	86-73-7	10.0	< 10.0	
Hexachlorobenzene	118-74-1	10.0	< 10.0	
Hexachlorobutadiene	87-68-3	10.0	< 10.0	
Hexachlorocyclopentadiene	77-47-4	10.0	< 10.0	
Hexachloroethane	67-72-1	10.0	< 10.0	
Hexachlorophene	70-30-4	10.0	< 10.0	
Hexachloropropene	1888-71-7	10.0	< 10.0	
Indene	95-13-6	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Isodrin	465-73-6	10.0	< 10.0	
Isophorone	78-59-1	10.0	< 10.0	
Isosafrole	120-58-1	10.0	< 10.0	
Kepone	143-50-0	10.0	< 10.0	
Methapyrilene	91-80-5	10.0	< 10.0	
Methyl methanesulfonate	66-27-3	10.0	< 10.0	
n-Decane	124-18-5	10.0	< 10.0	
N-Nitrosodi-n-butylamine	924-16-3	10.0	< 10.0	
N-Nitrosodiethylamine	55-18-5	10.0	< 10.0	
N-Nitrosodimethylamine	62-75-9	10.0	< 10.0	
N-Nitrosodiphenylamine	86-30-6	10.0	< 10.0	
N-Nitrosodi-n-propylamine	621-64-7	10.0	< 10.0	
N-Nitrosomethylethylamine	10595-95-6	10.0	< 10.0	
N-Nitrosomorpholine	59-89-2	10.0	< 10.0	
N-Nitrosopiperidine	100-75-4	10.0	< 10.0	
N-Nitrosopyrrolidine	930-55-2	10.0	< 10.0	
n-Octadecane	593-45-3	10.0	< 10.0	
Naphthalene	91-20-3	10.0	< 10.0	
Nitrobenzene	98-95-3	10.0	< 10.0	
Nitroquinoline-1-oxide	56-57-5	10.0	< 10.0	

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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

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-005B
Client Sample ID: RB @ 1100 E. 4992083
Collection Date: 12/6/2010 1700h
Analyzed: 12/7/2010 2258h
Received Date: 12/6/2010 1732h
Extracted: 12/7/2010 1059h
Method Used: EPA625

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Salt Lake City, UT
84115

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Toll Free (888) 263-8686
Fax (801)263-8687
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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Analytical Results SVOA by GC/MS Method 625/3510

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
O,O,O-Triethyl phosphorothioate	126-68-1	10.0	< 10.0	
o-Toluidine	95-53-4	10.0	< 10.0	
Parathion	56-38-2	10.0	< 10.0	
Methyl parathion	298-00-0	10.0	< 10.0	
Pentachlorobenzene	608-93-5	10.0	< 10.0	
Pentachloronitrobenzene	82-68-8	10.0	< 10.0	
Pentachlorophenol	87-86-5	10.0	< 10.0	
Phenacetin	62-44-2	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Phenol	108-95-2	10.0	< 10.0	
Phorate	298-02-2	10.0	< 10.0	
Pronamide	23950-58-5	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
Pyridine	110-86-1	10.0	< 10.0	~
Quinoline	91-22-5	10.0	< 10.0	
Safrole	94-59-7	10.0	< 10.0	
Tetraethyl dithiopyrophosphate	3689-24-5	10.0	< 10.0	
Thionazin	297-97-2	10.0	< 10.0	
Surr: 2,4,6-Tribromophenol	118-79-6	10-159	**74.6**	
Surr: 2-Fluorobiphenyl	321-60-8	10-124	**51.0**	
Surr: 2-Fluorophenol	367-12-4	10-106	**13.4**	
Surr: Nitrobenzene-d5	4165-60-0	10-180	**29.4**	
Surr: Phenol-d6	13127-88-3	10-122	**28.9**	
Surr: Terphenyl-d14	1718-51-0	10-199	**87.3**	

~ - LCS outliers are not target compounds for method 625 but are provided by AWAL as an additional service.
This sample was analyzed for TICs and no peaks were detected.

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-001A
Client Sample ID: RB AB Gardens 4992095
Collection Date: 12/6/2010 1515h
Analyzed: 12/7/2010 0020h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.00	< 2.00	
1,1,1-Trichloroethane	71-55-6	2.00	< 2.00	
1,1,2,2-Tetrachloroethane	79-34-5	2.00	< 2.00	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.00	< 2.00	
1,1,2-Trichloroethane	79-00-5	2.00	< 2.00	
1,1-Dichloropropene	563-58-6	2.00	< 2.00	
1,1-Dichloroethane	75-34-3	2.00	< 2.00	
1,1-Dichloroethene	75-35-4	2.00	< 2.00	
1,2,3-Trichlorobenzene	87-61-6	2.00	< 2.00	
1,2,3-Trichloropropane	96-18-4	2.00	< 2.00	
1,2,3-Trimethylbenzene	526-73-8	2.00	< 2.00	
1,2,4-Trichlorobenzene	120-82-1	2.00	< 2.00	
1,2,4-Trimethylbenzene	95-63-6	2.00	< 2.00	
1,2-Dibromo-3-chloropropane	96-12-8	2.00	< 2.00	
1,2-Dibromoethane	106-93-4	2.00	< 2.00	
1,2-Dichlorobenzene	95-50-1	2.00	< 2.00	
1,2-Dichloroethane	107-06-2	2.00	< 2.00	
1,2-Dichloropropane	78-87-5	2.00	< 2.00	
1,3,5-Trimethylbenzene	108-67-8	2.00	< 2.00	
1,3-Dichlorobenzene	541-73-1	2.00	< 2.00	
1,3-Dichloropropane	142-28-9	2.00	< 2.00	
1,4-Dichlorobenzene	106-46-7	2.00	< 2.00	
1,4-Dioxane	123-91-1	40.0	< 40.0	
2,2-Dichloropropane	594-20-7	2.00	< 2.00	
2-Butanone	78-93-3	10.0	< 10.0	
2-Chloroethyl vinyl ether	110-75-8	5.00	< 5.00	1
2-Chlorotoluene	95-49-8	2.00	< 2.00	
2-Hexanone	591-78-6	5.00	< 5.00	
2-Nitropropane	79-46-9	2.00	< 2.00	

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Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-001A
Client Sample ID: RB AB Gardens 4992095
Collection Date: 12/6/2010 1515h
Analyzed: 12/7/2010 0020h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Chlorotoluene	106-43-4	2.00	< 2.00	
4-Isopropyltoluene	99-87-6	2.00	< 2.00	
4-Methyl-2-pentanone	108-10-1	5.00	< 5.00	
Acetone	67-64-1	10.0	< 10.0	
Acetonitrile	75-05-8	5.00	< 5.00	
Acrolein	107-02-8	5.00	< 5.00	
Acrylonitrile	107-13-1	10.0	< 10.0	
Allyl chloride	107-05-1	5.00	< 5.00	
Benzene	71-43-2	2.00	< 2.00	
Benzyl chloride	100-44-7	5.00	< 5.00	
Bis(2-chloroisopropyl) ether	108-60-1	5.00	< 5.00	
Bromobenzene	108-86-1	2.00	< 2.00	
Bromochloromethane	74-97-5	2.00	< 2.00	
Bromodichloromethane	75-27-4	2.00	< 2.00	
Bromoform	75-25-2	2.00	< 2.00	
Bromomethane	74-83-9	5.00	< 5.00	
Butyl acetate	123-86-4	5.00	< 5.00	
Carbon disulfide	75-15-0	2.00	< 2.00	
Carbon tetrachloride	56-23-5	2.00	< 2.00	
Chlorobenzene	108-90-7	2.00	< 2.00	
Chloroethane	75-00-3	2.00	< 2.00	
Chloroform	67-66-3	2.00	< 2.00	
Chloromethane	74-87-3	5.00	< 5.00	
Chloroprene	126-99-8	2.00	< 2.00	
cis-1,2-Dichloroethene	156-59-2	2.00	< 2.00	
cis-1,3-Dichloropropene	10061-01-5	2.00	< 2.00	
Cyclohexane	110-82-7	2.00	< 2.00	
Cyclohexanone	108-94-1	50.0	< 50.0	
Dibromochloromethane	124-48-1	2.00	< 2.00	

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Salt Lake City, UT
84115

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-001A
Client Sample ID: RB AB Gardens 4992095
Collection Date: 12/6/2010 1515h
Analyzed: 12/7/2010 0020h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Dibromomethane	74-95-3	2.00	< 2.00	
Dichlorodifluoromethane	75-71-8	2.00	< 2.00	
Ethyl acetate	141-78-6	10.0	< 10.0	
Ethyl ether	60-29-7	10.0	< 10.0	
Ethyl methacrylate	97-63-2	2.00	< 2.00	
Ethylbenzene	100-41-4	2.00	< 2.00	
Hexachlorobutadiene	87-68-3	2.00	< 2.00	
Iodomethane	74-88-4	5.00	< 5.00	
Isobutyl alcohol	78-83-1	100	< 100	
Isopropyl acetate	108-21-4	2.00	< 2.00	
Isopropyl alcohol	67-63-0	25.0	< 25.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
Isopropyltoluene	99-87-6	2.00	< 2.00	
m,p-Xylene	179601-23-1	2.00	< 2.00	
Methacrylonitrile	126-98-7	5.00	< 5.00	
Methyl Acetate	79-20-9	5.00	< 5.00	@
Methyl methacrylate	80-62-6	5.00	< 5.00	
Methyl tert-butyl ether	1634-04-4	2.00	< 2.00	
Methylcyclohexane	108-87-2	2.00	< 2.00	
Methylene chloride	75-09-2	2.00	< 2.00	
n-Amyl acetate	628-63-7	2.00	< 2.00	
n-Butyl alcohol	71-36-3	25.0	< 25.0	
n-Butylbenzene	104-51-8	2.00	< 2.00	
n-Hexane	110-54-3	2.00	< 2.00	@
n-Octane	111-65-9	2.00	< 2.00	
n-Propylbenzene	103-65-1	2.00	< 2.00	
Naphthalene	91-20-3	2.00	< 2.00	
o-Xylene	95-47-6	2.00	< 2.00	
Pentachloroethane	76-01-7	2.00	< 2.00	

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Salt Lake City, UT
84115

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Kyle F. Gross
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Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-001A
Client Sample ID: RB AB Gardens 4992095
Collection Date: 12/6/2010 1515h
Analyzed: 12/7/2010 0020h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Propionitrile	107-12-0	25.0	< 25.0	
Propyl acetate	109-60-4	2.00	< 2.00	
sec-Butylbenzene	135-98-8	2.00	< 2.00	
Styrene	100-42-5	2.00	< 2.00	
tert-Butyl alcohol	76-65-0	20.0	< 20.0	
tert-Butylbenzene	98-06-6	2.00	< 2.00	
Tetrachloroethene	127-18-4	2.00	< 2.00	
Tetrahydrofuran	109-99-9	2.00	< 2.00	
Toluene	108-88-3	2.00	< 2.00	
trans-1,2-Dichloroethene	156-60-5	2.00	< 2.00	
trans-1,3-Dichloropropene	10061-02-6	2.00	< 2.00	
trans-1,4-Dichloro-2-butene	110-57-6	2.00	< 2.00	
Trichloroethene	79-01-6	2.00	< 2.00	
Trichlorofluoromethane	75-69-4	2.00	< 2.00	
Vinyl acetate	108-05-4	5.00	< 5.00	
Vinyl chloride	75-01-4	1.00	< 1.00	
Xylenes, Total	1330-20-7	2.00	< 2.00	
TPH C11-C15 (DRO)		20.0	< 20.0	
TPH C6-C10 (GRO)		20.0	< 20.0	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	**95.8**	
Surr: 4-Bromofluorobenzene	460-00-4	80-123	**108**	
Surr: Dibromofluoromethane	1868-53-7	80-124	**100**	
Surr: Toluene-d8	2037-26-5	80-125	**99.0**	

[1] - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.
@ - High RPD due to suspected sample non-homogeneity or matrix interference.

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Salt Lake City, UT
84115

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Laboratory Director

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QA Officer

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-002A
Client Sample ID: RB NR Greenhouse 4992088
Collection Date: 12/6/2010 1545h
Analyzed: 12/7/2010 0039h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.00	< 2.00	
1,1,1-Trichloroethane	71-55-6	2.00	< 2.00	
1,1,2,2-Tetrachloroethane	79-34-5	2.00	< 2.00	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.00	< 2.00	
1,1,2-Trichloroethane	79-00-5	2.00	< 2.00	
1,1-Dichloropropene	563-58-6	2.00	< 2.00	
1,1-Dichloroethane	75-34-3	2.00	< 2.00	
1,1-Dichloroethene	75-35-4	2.00	< 2.00	
1,2,3-Trichlorobenzene	87-61-6	2.00	< 2.00	
1,2,3-Trichloropropane	96-18-4	2.00	< 2.00	
1,2,3-Trimethylbenzene	526-73-8	2.00	< 2.00	
1,2,4-Trichlorobenzene	120-82-1	2.00	< 2.00	
1,2,4-Trimethylbenzene	95-63-6	2.00	< 2.00	
1,2-Dibromo-3-chloropropane	96-12-8	2.00	< 2.00	
1,2-Dibromoethane	106-93-4	2.00	< 2.00	
1,2-Dichlorobenzene	95-50-1	2.00	< 2.00	
1,2-Dichloroethane	107-06-2	2.00	< 2.00	
1,2-Dichloropropane	78-87-5	2.00	< 2.00	
1,3,5-Trimethylbenzene	108-67-8	2.00	< 2.00	
1,3-Dichlorobenzene	541-73-1	2.00	< 2.00	
1,3-Dichloropropane	142-28-9	2.00	< 2.00	
1,4-Dichlorobenzene	106-46-7	2.00	< 2.00	
1,4-Dioxane	123-91-1	40.0	< 40.0	
2,2-Dichloropropane	594-20-7	2.00	< 2.00	
2-Butanone	78-93-3	10.0	< 10.0	
2-Chloroethyl vinyl ether	110-75-8	5.00	< 5.00	
2-Chlorotoluene	95-49-8	2.00	< 2.00	
2-Hexanone	591-78-6	5.00	< 5.00	
2-Nitropropane	79-46-9	2.00	< 2.00	

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Salt Lake City, UT
84115

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Kyle F. Gross
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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-002A
Client Sample ID: RB NR Greenhouse 4992088
Collection Date: 12/6/2010 1545h
Analyzed: 12/7/2010 0039h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Chlorotoluene	106-43-4	2.00	< 2.00	
4-Isopropyltoluene	99-87-6	2.00	< 2.00	
4-Methyl-2-pentanone	108-10-1	5.00	< 5.00	
Acetone	67-64-1	10.0	< 10.0	
Acetonitrile	75-05-8	5.00	< 5.00	
Acrolein	107-02-8	5.00	< 5.00	
Acrylonitrile	107-13-1	10.0	< 10.0	
Allyl chloride	107-05-1	5.00	< 5.00	
Benzene	71-43-2	2.00	< 2.00	
Benzyl chloride	100-44-7	5.00	< 5.00	
Bis(2-chloroisopropyl) ether	108-60-1	5.00	< 5.00	
Bromobenzene	108-86-1	2.00	< 2.00	
Bromochloromethane	74-97-5	2.00	< 2.00	
Bromodichloromethane	75-27-4	2.00	< 2.00	
Bromoform	75-25-2	2.00	< 2.00	
Bromomethane	74-83-9	5.00	< 5.00	
Butyl acetate	123-86-4	5.00	< 5.00	
Carbon disulfide	75-15-0	2.00	< 2.00	
Carbon tetrachloride	56-23-5	2.00	< 2.00	
Chlorobenzene	108-90-7	2.00	< 2.00	
Chloroethane	75-00-3	2.00	< 2.00	
Chloroform	67-66-3	2.00	< 2.00	
Chloromethane	74-87-3	5.00	< 5.00	
Chloroprene	126-99-8	2.00	< 2.00	
cis-1,2-Dichloroethene	156-59-2	2.00	< 2.00	
cis-1,3-Dichloropropene	10061-01-5	2.00	< 2.00	
Cyclohexane	110-82-7	2.00	< 2.00	
Cyclohexanone	108-94-1	50.0	< 50.0	
Dibromochloromethane	124-48-1	2.00	< 2.00	

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Salt Lake City, UT
84115

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-002A
Client Sample ID: RB NR Greenhouse 4992088
Collection Date: 12/6/2010 1545h
Analyzed: 12/7/2010 0039h
Received Date: 12/6/2010 1732h
Method Used: EPA624

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84115

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Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Dibromomethane	74-95-3	2.00	< 2.00	
Dichlorodifluoromethane	75-71-8	2.00	< 2.00	
Ethyl acetate	141-78-6	10.0	< 10.0	
Ethyl ether	60-29-7	10.0	< 10.0	
Ethyl methacrylate	97-63-2	2.00	< 2.00	
Ethylbenzene	100-41-4	2.00	< 2.00	
Hexachlorobutadiene	87-68-3	2.00	< 2.00	
Iodomethane	74-88-4	5.00	< 5.00	
Isobutyl alcohol	78-83-1	100	< 100	
Isopropyl acetate	108-21-4	2.00	< 2.00	
Isopropyl alcohol	67-63-0	25.0	< 25.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
Isopropyltoluene	99-87-6	2.00	< 2.00	
m,p-Xylene	179601-23-1	2.00	< 2.00	
Methacrylonitrile	126-98-7	5.00	< 5.00	
Methyl Acetate	79-20-9	5.00	< 5.00	
Methyl methacrylate	80-62-6	5.00	< 5.00	
Methyl tert-butyl ether	1634-04-4	2.00	< 2.00	
Methylcyclohexane	108-87-2	2.00	< 2.00	
Methylene chloride	75-09-2	2.00	< 2.00	
n-Amyl acetate	628-63-7	2.00	< 2.00	
n-Butyl alcohol	71-36-3	25.0	< 25.0	
n-Butylbenzene	104-51-8	2.00	< 2.00	
n-Hexane	110-54-3	2.00	< 2.00	
n-Octane	111-65-9	2.00	< 2.00	
n-Propylbenzene	103-65-1	2.00	< 2.00	
Naphthalene	91-20-3	2.00	< 2.00	
o-Xylene	95-47-6	2.00	< 2.00	
Pentachloroethane	76-01-7	2.00	< 2.00	

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-002A
Client Sample ID: RB NR Greenhouse 4992088
Collection Date: 12/6/2010 1545h
Analyzed: 12/7/2010 0039h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Propionitrile	107-12-0	25.0	< 25.0	
Propyl acetate	109-60-4	2.00	< 2.00	
sec-Butylbenzene	135-98-8	2.00	< 2.00	
Styrene	100-42-5	2.00	< 2.00	
tert-Butyl alcohol	76-65-0	20.0	< 20.0	
tert-Butylbenzene	98-06-6	2.00	< 2.00	
Tetrachloroethene	127-18-4	2.00	< 2.00	
Tetrahydrofuran	109-99-9	2.00	< 2.00	
Toluene	108-88-3	2.00	< 2.00	
trans-1,2-Dichloroethene	156-60-5	2.00	< 2.00	
trans-1,3-Dichloropropene	10061-02-6	2.00	< 2.00	
trans-1,4-Dichloro-2-butene	110-57-6	2.00	< 2.00	
Trichloroethene	79-01-6	2.00	< 2.00	
Trichlorofluoromethane	75-69-4	2.00	< 2.00	
Vinyl acetate	108-05-4	5.00	< 5.00	
Vinyl chloride	75-01-4	1.00	< 1.00	
Xylenes, Total	1330-20-7	2.00	< 2.00	
TPH C11-C15 (DRO)		20.0	< 20.0	
TPH C6-C10 (GRO)		20.0	< 20.0	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	**103**	
Surr: 4-Bromofluorobenzene	460-00-4	80-123	**106**	
Surr: Dibromofluoromethane	1868-53-7	80-124	**101**	
Surr: Toluene-d8	2037-26-5	80-125	**98.7**	

AMERICAN WEST ANALYTICAL LABORATORIES

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

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-003A
Client Sample ID: RB @ Foothill 4992086
Collection Date: 12/6/2010 1615h
Analyzed: 12/7/2010 0213h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.00	< 2.00	
1,1,1-Trichloroethane	71-55-6	2.00	< 2.00	
1,1,2,2-Tetrachloroethane	79-34-5	2.00	< 2.00	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.00	< 2.00	
1,1,2-Trichloroethane	79-00-5	2.00	< 2.00	
1,1-Dichloropropene	563-58-6	2.00	< 2.00	
1,1-Dichloroethane	75-34-3	2.00	< 2.00	
1,1-Dichloroethene	75-35-4	2.00	< 2.00	
1,2,3-Trichlorobenzene	87-61-6	2.00	< 2.00	
1,2,3-Trichloropropane	96-18-4	2.00	< 2.00	
1,2,3-Trimethylbenzene	526-73-8	2.00	< 2.00	
1,2,4-Trichlorobenzene	120-82-1	2.00	< 2.00	
1,2,4-Trimethylbenzene	95-63-6	2.00	< 2.00	
1,2-Dibromo-3-chloropropane	96-12-8	2.00	< 2.00	
1,2-Dibromoethane	106-93-4	2.00	< 2.00	
1,2-Dichlorobenzene	95-50-1	2.00	< 2.00	
1,2-Dichloroethane	107-06-2	2.00	< 2.00	
1,2-Dichloropropane	78-87-5	2.00	< 2.00	
1,3,5-Trimethylbenzene	108-67-8	2.00	< 2.00	
1,3-Dichlorobenzene	541-73-1	2.00	< 2.00	
1,3-Dichloropropane	142-28-9	2.00	< 2.00	
1,4-Dichlorobenzene	106-46-7	2.00	< 2.00	
1,4-Dioxane	123-91-1	40.0	< 40.0	
2,2-Dichloropropane	594-20-7	2.00	< 2.00	
2-Butanone	78-93-3	10.0	< 10.0	
2-Chloroethyl vinyl ether	110-75-8	5.00	< 5.00	
2-Chlorotoluene	95-49-8	2.00	< 2.00	
2-Hexanone	591-78-6	5.00	< 5.00	
2-Nitropropane	79-46-9	2.00	< 2.00	

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Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-003A
Client Sample ID: RB @ Foothill 4992086
Collection Date: 12/6/2010 1615h
Analyzed: 12/7/2010 0213h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Chlorotoluene	106-43-4	2.00	< 2.00	
4-Isopropyltoluene	99-87-6	2.00	< 2.00	
4-Methyl-2-pentanone	108-10-1	5.00	< 5.00	
Acetone	67-64-1	10.0	< 10.0	
Acetonitrile	75-05-8	5.00	< 5.00	
Acrolein	107-02-8	5.00	< 5.00	
Acrylonitrile	107-13-1	10.0	< 10.0	
Allyl chloride	107-05-1	5.00	< 5.00	
Benzene	71-43-2	2.00	< 2.00	
Benzyl chloride	100-44-7	5.00	< 5.00	
Bis(2-chloroisopropyl) ether	108-60-1	5.00	< 5.00	
Bromobenzene	108-86-1	2.00	< 2.00	
Bromochloromethane	74-97-5	2.00	< 2.00	
Bromodichloromethane	75-27-4	2.00	< 2.00	
Bromoform	75-25-2	2.00	< 2.00	
Bromomethane	74-83-9	5.00	< 5.00	
Butyl acetate	123-86-4	5.00	< 5.00	
Carbon disulfide	75-15-0	2.00	< 2.00	
Carbon tetrachloride	56-23-5	2.00	< 2.00	
Chlorobenzene	108-90-7	2.00	< 2.00	
Chloroethane	75-00-3	2.00	< 2.00	
Chloroform	67-66-3	2.00	< 2.00	
Chloromethane	74-87-3	5.00	< 5.00	
Chloroprene	126-99-8	2.00	< 2.00	
cis-1,2-Dichloroethene	156-59-2	2.00	< 2.00	
cis-1,3-Dichloropropene	10061-01-5	2.00	< 2.00	
Cyclohexane	110-82-7	2.00	< 2.00	
Cyclohexanone	108-94-1	50.0	< 50.0	
Dibromochloromethane	124-48-1	2.00	< 2.00	

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Salt Lake City, UT
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Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-003A
Client Sample ID: RB @ Foothill 4992086
Collection Date: 12/6/2010 1615h
Analyzed: 12/7/2010 0213h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Dibromomethane	74-95-3	2.00	< 2.00	
Dichlorodifluoromethane	75-71-8	2.00	< 2.00	
Ethyl acetate	141-78-6	10.0	< 10.0	
Ethyl ether	60-29-7	10.0	< 10.0	
Ethyl methacrylate	97-63-2	2.00	< 2.00	
Ethylbenzene	100-41-4	2.00	< 2.00	
Hexachlorobutadiene	87-68-3	2.00	< 2.00	
Iodomethane	74-88-4	5.00	< 5.00	
Isobutyl alcohol	78-83-1	100	< 100	
Isopropyl acetate	108-21-4	2.00	< 2.00	
Isopropyl alcohol	67-63-0	25.0	< 25.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
Isopropyltoluene	99-87-6	2.00	< 2.00	
m,p-Xylene	179601-23-1	2.00	< 2.00	
Methacrylonitrile	126-98-7	5.00	< 5.00	
Methyl Acetate	79-20-9	5.00	< 5.00	
Methyl methacrylate	80-62-6	5.00	< 5.00	
Methyl tert-butyl ether	1634-04-4	2.00	< 2.00	
Methylcyclohexane	108-87-2	2.00	< 2.00	
Methylene chloride	75-09-2	2.00	< 2.00	
n-Amyl acetate	628-63-7	2.00	< 2.00	
n-Butyl alcohol	71-36-3	25.0	< 25.0	
n-Butylbenzene	104-51-8	2.00	< 2.00	
n-Hexane	110-54-3	2.00	< 2.00	
n-Octane	111-65-9	2.00	< 2.00	
n-Propylbenzene	103-65-1	2.00	< 2.00	
Naphthalene	91-20-3	2.00	< 2.00	
o-Xylene	95-47-6	2.00	< 2.00	
Pentachloroethane	76-01-7	2.00	< 2.00	

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-003A
Client Sample ID: RB @ Foothill 4992086
Collection Date: 12/6/2010 1615h
Analyzed: 12/7/2010 0213h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Propionitrile	107-12-0	25.0	< 25.0	
Propyl acetate	109-60-4	2.00	< 2.00	
sec-Butylbenzene	135-98-8	2.00	< 2.00	
Styrene	100-42-5	2.00	< 2.00	
tert-Butyl alcohol	76-65-0	20.0	< 20.0	
tert-Butylbenzene	98-06-6	2.00	< 2.00	
Tetrachloroethene	127-18-4	2.00	< 2.00	
Tetrahydrofuran	109-99-9	2.00	< 2.00	
Toluene	108-88-3	2.00	< 2.00	
trans-1,2-Dichloroethene	156-60-5	2.00	< 2.00	
trans-1,3-Dichloropropene	10061-02-6	2.00	< 2.00	
trans-1,4-Dichloro-2-butene	110-57-6	2.00	< 2.00	
Trichloroethene	79-01-6	2.00	< 2.00	
Trichlorofluoromethane	75-69-4	2.00	< 2.00	
Vinyl acetate	108-05-4	5.00	< 5.00	
Vinyl chloride	75-01-4	1.00	< 1.00	
Xylenes, Total	1330-20-7	2.00	< 2.00	
TPH C11-C15 (DRO)		20.0	< 20.0	
TPH C6-C10 (GRO)		20.0	< 20.0	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	**110**	
Surr: 4-Bromofluorobenzene	460-00-4	80-123	**108**	
Surr: Dibromofluoromethane	1868-53-7	80-124	**105**	
Surr: Toluene-d8	2037-26-5	80-125	**97.4**	

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-004A
Client Sample ID: RB @ Miller Pk 4992084
Collection Date: 12/6/2010 1640h
Analyzed: 12/7/2010 0232h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.00	< 2.00	
1,1,1-Trichloroethane	71-55-6	2.00	< 2.00	
1,1,2,2-Tetrachloroethane	79-34-5	2.00	< 2.00	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.00	< 2.00	
1,1,2-Trichloroethane	79-00-5	2.00	< 2.00	
1,1-Dichloropropene	563-58-6	2.00	< 2.00	
1,1-Dichloroethane	75-34-3	2.00	< 2.00	
1,1-Dichloroethene	75-35-4	2.00	< 2.00	
1,2,3-Trichlorobenzene	87-61-6	2.00	< 2.00	
1,2,3-Trichloropropane	96-18-4	2.00	< 2.00	
1,2,3-Trimethylbenzene	526-73-8	2.00	< 2.00	
1,2,4-Trichlorobenzene	120-82-1	2.00	< 2.00	
1,2,4-Trimethylbenzene	95-63-6	2.00	< 2.00	
1,2-Dibromo-3-chloropropane	96-12-8	2.00	< 2.00	
1,2-Dibromoethane	106-93-4	2.00	< 2.00	
1,2-Dichlorobenzene	95-50-1	2.00	< 2.00	
1,2-Dichloroethane	107-06-2	2.00	< 2.00	
1,2-Dichloropropane	78-87-5	2.00	< 2.00	
1,3,5-Trimethylbenzene	108-67-8	2.00	< 2.00	
1,3-Dichlorobenzene	541-73-1	2.00	< 2.00	
1,3-Dichloropropane	142-28-9	2.00	< 2.00	
1,4-Dichlorobenzene	106-46-7	2.00	< 2.00	
1,4-Dioxane	123-91-1	40.0	< 40.0	
2,2-Dichloropropane	594-20-7	2.00	< 2.00	
2-Butanone	78-93-3	10.0	< 10.0	
2-Chloroethyl vinyl ether	110-75-8	5.00	< 5.00	
2-Chlorotoluene	95-49-8	2.00	< 2.00	
2-Hexanone	591-78-6	5.00	< 5.00	
2-Nitropropane	79-46-9	2.00	< 2.00	

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Salt Lake City, UT
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Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-004A
Client Sample ID: RB @ Miller Pk 4992084
Collection Date: 12/6/2010 1640h
Analyzed: 12/7/2010 0232h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Chlorotoluene	106-43-4	2.00	< 2.00	
4-Isopropyltoluene	99-87-6	2.00	< 2.00	
4-Methyl-2-pentanone	108-10-1	5.00	< 5.00	
Acetone	67-64-1	10.0	< 10.0	
Acetonitrile	75-05-8	5.00	< 5.00	
Acrolein	107-02-8	5.00	< 5.00	
Acrylonitrile	107-13-1	10.0	< 10.0	
Allyl chloride	107-05-1	5.00	< 5.00	
Benzene	71-43-2	2.00	< 2.00	
Benzyl chloride	100-44-7	5.00	< 5.00	
Bis(2-chloroisopropyl) ether	108-60-1	5.00	< 5.00	
Bromobenzene	108-86-1	2.00	< 2.00	
Bromochloromethane	74-97-5	2.00	< 2.00	
Bromodichloromethane	75-27-4	2.00	< 2.00	
Bromoform	75-25-2	2.00	< 2.00	
Bromomethane	74-83-9	5.00	< 5.00	
Butyl acetate	123-86-4	5.00	< 5.00	
Carbon disulfide	75-15-0	2.00	< 2.00	
Carbon tetrachloride	56-23-5	2.00	< 2.00	
Chlorobenzene	108-90-7	2.00	< 2.00	
Chloroethane	75-00-3	2.00	< 2.00	
Chloroform	67-66-3	2.00	< 2.00	
Chloromethane	74-87-3	5.00	< 5.00	
Chloroprene	126-99-8	2.00	< 2.00	
cis-1,2-Dichloroethene	156-59-2	2.00	< 2.00	
cis-1,3-Dichloropropene	10061-01-5	2.00	< 2.00	
Cyclohexane	110-82-7	2.00	< 2.00	
Cyclohexanone	108-94-1	50.0	< 50.0	
Dibromochloromethane	124-48-1	2.00	< 2.00	

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-004A
Client Sample ID: RB @ Miller Pk 4992084
Collection Date: 12/6/2010 1640h
Analyzed: 12/7/2010 0232h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Dibromomethane	74-95-3	2.00	< 2.00	
Dichlorodifluoromethane	75-71-8	2.00	< 2.00	
Ethyl acetate	141-78-6	10.0	< 10.0	
Ethyl ether	60-29-7	10.0	< 10.0	
Ethyl methacrylate	97-63-2	2.00	< 2.00	
Ethylbenzene	100-41-4	2.00	< 2.00	
Hexachlorobutadiene	87-68-3	2.00	< 2.00	
Iodomethane	74-88-4	5.00	< 5.00	
Isobutyl alcohol	78-83-1	100	< 100	
Isopropyl acetate	108-21-4	2.00	< 2.00	
Isopropyl alcohol	67-63-0	25.0	< 25.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
Isopropyltoluene	99-87-6	2.00	< 2.00	
m,p-Xylene	179601-23-1	2.00	< 2.00	
Methacrylonitrile	126-98-7	5.00	< 5.00	
Methyl Acetate	79-20-9	5.00	< 5.00	
Methyl methacrylate	80-62-6	5.00	< 5.00	
Methyl tert-butyl ether	1634-04-4	2.00	< 2.00	
Methylcyclohexane	108-87-2	2.00	< 2.00	
Methylene chloride	75-09-2	2.00	< 2.00	
n-Amyl acetate	628-63-7	2.00	< 2.00	
n-Butyl alcohol	71-36-3	25.0	< 25.0	
n-Butylbenzene	104-51-8	2.00	< 2.00	
n-Hexane	110-54-3	2.00	< 2.00	
n-Octane	111-65-9	2.00	< 2.00	
n-Propylbenzene	103-65-1	2.00	< 2.00	
Naphthalene	91-20-3	2.00	< 2.00	
o-Xylene	95-47-6	2.00	< 2.00	
Pentachloroethane	76-01-7	2.00	< 2.00	

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-004A
Client Sample ID: RB @ Miller Pk 4992084
Collection Date: 12/6/2010 1640h
Analyzed: 12/7/2010 0232h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Propionitrile	107-12-0	25.0	< 25.0	
Propyl acetate	109-60-4	2.00	< 2.00	
sec-Butylbenzene	135-98-8	2.00	< 2.00	
Styrene	100-42-5	2.00	< 2.00	
tert-Butyl alcohol	76-65-0	20.0	< 20.0	
tert-Butylbenzene	98-06-6	2.00	< 2.00	
Tetrachloroethene	127-18-4	2.00	< 2.00	
Tetrahydrofuran	109-99-9	2.00	< 2.00	
Toluene	108-88-3	2.00	< 2.00	
trans-1,2-Dichloroethene	156-60-5	2.00	< 2.00	
trans-1,3-Dichloropropene	10061-02-6	2.00	< 2.00	
trans-1,4-Dichloro-2-butene	110-57-6	2.00	< 2.00	
Trichloroethene	79-01-6	2.00	< 2.00	
Trichlorofluoromethane	75-69-4	2.00	< 2.00	
Vinyl acetate	108-05-4	5.00	< 5.00	
Vinyl chloride	75-01-4	1.00	< 1.00	
Xylenes, Total	1330-20-7	2.00	< 2.00	
TPH C11-C15 (DRO)		20.0	< 20.0	
TPH C6-C10 (GRO)		20.0	< 20.0	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	**112**	
Surr: 4-Bromofluorobenzene	460-00-4	80-123	**108**	
Surr: Dibromofluoromethane	1868-53-7	80-124	**106**	
Surr: Toluene-d8	2037-26-5	80-125	**98.8**	

AMERICAN WEST ANALYTICAL LABORATORIES

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

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-005A
Client Sample ID: RB @ 1100 E. 4992083
Collection Date: 12/6/2010 1700h
Analyzed: 12/7/2010 0251h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.00	< 2.00	
1,1,1-Trichloroethane	71-55-6	2.00	< 2.00	
1,1,2,2-Tetrachloroethane	79-34-5	2.00	< 2.00	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.00	< 2.00	
1,1,2-Trichloroethane	79-00-5	2.00	< 2.00	
1,1-Dichloropropene	563-58-6	2.00	< 2.00	
1,1-Dichloroethane	75-34-3	2.00	< 2.00	
1,1-Dichloroethene	75-35-4	2.00	< 2.00	
1,2,3-Trichlorobenzene	87-61-6	2.00	< 2.00	
1,2,3-Trichloropropane	96-18-4	2.00	< 2.00	
1,2,3-Trimethylbenzene	526-73-8	2.00	< 2.00	
1,2,4-Trichlorobenzene	120-82-1	2.00	< 2.00	
1,2,4-Trimethylbenzene	95-63-6	2.00	< 2.00	
1,2-Dibromo-3-chloropropane	96-12-8	2.00	< 2.00	
1,2-Dibromoethane	106-93-4	2.00	< 2.00	
1,2-Dichlorobenzene	95-50-1	2.00	< 2.00	
1,2-Dichloroethane	107-06-2	2.00	< 2.00	
1,2-Dichloropropane	78-87-5	2.00	< 2.00	
1,3,5-Trimethylbenzene	108-67-8	2.00	< 2.00	
1,3-Dichlorobenzene	541-73-1	2.00	< 2.00	
1,3-Dichloropropane	142-28-9	2.00	< 2.00	
1,4-Dichlorobenzene	106-46-7	2.00	< 2.00	
1,4-Dioxane	123-91-1	40.0	< 40.0	
2,2-Dichloropropane	594-20-7	2.00	< 2.00	
2-Butanone	78-93-3	10.0	< 10.0	
2-Chloroethyl vinyl ether	110-75-8	5.00	< 5.00	
2-Chlorotoluene	95-49-8	2.00	< 2.00	
2-Hexanone	591-78-6	5.00	< 5.00	
2-Nitropropane	79-46-9	2.00	< 2.00	

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-005A
Client Sample ID: RB @ 1100 E. 4992083
Collection Date: 12/6/2010 1700h
Analyzed: 12/7/2010 0251h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Chlorotoluene	106-43-4	2.00	< 2.00	
4-Isopropyltoluene	99-87-6	2.00	< 2.00	
4-Methyl-2-pentanone	108-10-1	5.00	< 5.00	
Acetone	67-64-1	10.0	< 10.0	
Acetonitrile	75-05-8	5.00	< 5.00	
Acrolein	107-02-8	5.00	< 5.00	
Acrylonitrile	107-13-1	10.0	< 10.0	
Allyl chloride	107-05-1	5.00	< 5.00	
Benzene	71-43-2	2.00	< 2.00	
Benzyl chloride	100-44-7	5.00	< 5.00	
Bis(2-chloroisopropyl) ether	108-60-1	5.00	< 5.00	
Bromobenzene	108-86-1	2.00	< 2.00	
Bromochloromethane	74-97-5	2.00	< 2.00	
Bromodichloromethane	75-27-4	2.00	< 2.00	
Bromoform	75-25-2	2.00	< 2.00	
Bromomethane	74-83-9	5.00	< 5.00	
Butyl acetate	123-86-4	5.00	< 5.00	
Carbon disulfide	75-15-0	2.00	< 2.00	
Carbon tetrachloride	56-23-5	2.00	< 2.00	
Chlorobenzene	108-90-7	2.00	< 2.00	
Chloroethane	75-00-3	2.00	< 2.00	
Chloroform	67-66-3	2.00	< 2.00	
Chloromethane	74-87-3	5.00	< 5.00	
Chloroprene	126-99-8	2.00	< 2.00	
cis-1,2-Dichloroethene	156-59-2	2.00	< 2.00	
cis-1,3-Dichloropropene	10061-01-5	2.00	< 2.00	
Cyclohexane	110-82-7	2.00	< 2.00	
Cyclohexanone	108-94-1	50.0	< 50.0	
Dibromochloromethane	124-48-1	2.00	< 2.00	

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-005A
Client Sample ID: RB @ 1100 E. 4992083
Collection Date: 12/6/2010 1700h
Analyzed: 12/7/2010 0251h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Dibromomethane	74-95-3	2.00	< 2.00	
Dichlorodifluoromethane	75-71-8	2.00	< 2.00	
Ethyl acetate	141-78-6	10.0	< 10.0	
Ethyl ether	60-29-7	10.0	< 10.0	
Ethyl methacrylate	97-63-2	2.00	< 2.00	
Ethylbenzene	100-41-4	2.00	< 2.00	
Hexachlorobutadiene	87-68-3	2.00	< 2.00	
Iodomethane	74-88-4	5.00	< 5.00	
Isobutyl alcohol	78-83-1	100	< 100	
Isopropyl acetate	108-21-4	2.00	< 2.00	
Isopropyl alcohol	67-63-0	25.0	< 25.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
Isopropyltoluene	99-87-6	2.00	< 2.00	
m,p-Xylene	179601-23-1	2.00	< 2.00	
Methacrylonitrile	126-98-7	5.00	< 5.00	
Methyl Acetate	79-20-9	5.00	< 5.00	
Methyl methacrylate	80-62-6	5.00	< 5.00	
Methyl tert-butyl ether	1634-04-4	2.00	< 2.00	
Methylcyclohexane	108-87-2	2.00	< 2.00	
Methylene chloride	75-09-2	2.00	< 2.00	
n-Amyl acetate	628-63-7	2.00	< 2.00	
n-Butyl alcohol	71-36-3	25.0	< 25.0	
n-Butylbenzene	104-51-8	2.00	< 2.00	
n-Hexane	110-54-3	2.00	< 2.00	
n-Octane	111-65-9	2.00	< 2.00	
n-Propylbenzene	103-65-1	2.00	< 2.00	
Naphthalene	91-20-3	2.00	< 2.00	
o-Xylene	95-47-6	2.00	< 2.00	
Pentachloroethane	76-01-7	2.00	< 2.00	

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ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-005A
Client Sample ID: RB @ 1100 E. 4992083
Collection Date: 12/6/2010 1700h
Analyzed: 12/7/2010 0251h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Propionitrile	107-12-0	25.0	< 25.0	
Propyl acetate	109-60-4	2.00	< 2.00	
sec-Butylbenzene	135-98-8	2.00	< 2.00	
Styrene	100-42-5	2.00	< 2.00	
tert-Butyl alcohol	76-65-0	20.0	< 20.0	
tert-Butylbenzene	98-06-6	2.00	< 2.00	
Tetrachloroethene	127-18-4	2.00	< 2.00	
Tetrahydrofuran	109-99-9	2.00	< 2.00	
Toluene	108-88-3	2.00	< 2.00	
trans-1,2-Dichloroethene	156-60-5	2.00	< 2.00	
trans-1,3-Dichloropropene	10061-02-6	2.00	< 2.00	
trans-1,4-Dichloro-2-butene	110-57-6	2.00	< 2.00	
Trichloroethene	79-01-6	2.00	< 2.00	
Trichlorofluoromethane	75-69-4	2.00	< 2.00	
Vinyl acetate	108-05-4	5.00	< 5.00	
Vinyl chloride	75-01-4	1.00	< 1.00	
Xylenes, Total	1330-20-7	2.00	< 2.00	
TPH C11-C15 (DRO)		20.0	< 20.0	
TPH C6-C10 (GRO)		20.0	< 20.0	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	**113**	
Surr: 4-Bromofluorobenzene	460-00-4	80-123	**106**	
Surr: Dibromofluoromethane	1868-53-7	80-124	**106**	
Surr: Toluene-d8	2037-26-5	80-125	**97.5**	

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Jose Rocha
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Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-006A
Client Sample ID: Trip Blank
Collection Date: 12/6/2010 1500h
Analyzed: 12/7/2010 0329h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.00	< 2.00	
1,1,1-Trichloroethane	71-55-6	2.00	< 2.00	
1,1,2,2-Tetrachloroethane	79-34-5	2.00	< 2.00	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.00	< 2.00	
1,1,2-Trichloroethane	79-00-5	2.00	< 2.00	
1,1-Dichloropropene	563-58-6	2.00	< 2.00	
1,1-Dichloroethane	75-34-3	2.00	< 2.00	
1,1-Dichloroethene	75-35-4	2.00	< 2.00	
1,2,3-Trichlorobenzene	87-61-6	2.00	< 2.00	
1,2,3-Trichloropropane	96-18-4	2.00	< 2.00	
1,2,3-Trimethylbenzene	526-73-8	2.00	< 2.00	
1,2,4-Trichlorobenzene	120-82-1	2.00	< 2.00	
1,2,4-Trimethylbenzene	95-63-6	2.00	< 2.00	
1,2-Dibromo-3-chloropropane	96-12-8	2.00	< 2.00	
1,2-Dibromoethane	106-93-4	2.00	< 2.00	
1,2-Dichlorobenzene	95-50-1	2.00	< 2.00	
1,2-Dichloroethane	107-06-2	2.00	< 2.00	
1,2-Dichloropropane	78-87-5	2.00	< 2.00	
1,3,5-Trimethylbenzene	108-67-8	2.00	< 2.00	
1,3-Dichlorobenzene	541-73-1	2.00	< 2.00	
1,3-Dichloropropane	142-28-9	2.00	< 2.00	
1,4-Dichlorobenzene	106-46-7	2.00	< 2.00	
1,4-Dioxane	123-91-1	40.0	< 40.0	
2,2-Dichloropropane	594-20-7	2.00	< 2.00	
2-Butanone	78-93-3	10.0	< 10.0	
2-Chloroethyl vinyl ether	110-75-8	5.00	< 5.00	
2-Chlorotoluene	95-49-8	2.00	< 2.00	
2-Hexanone	591-78-6	5.00	< 5.00	
2-Nitropropane	79-46-9	2.00	< 2.00	

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-006A
Client Sample ID: Trip Blank
Collection Date: 12/6/2010 1500h
Analyzed: 12/7/2010 0329h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Chlorotoluene	106-43-4	2.00	< 2.00	
4-Isopropyltoluene	99-87-6	2.00	< 2.00	
4-Methyl-2-pentanone	108-10-1	5.00	< 5.00	
Acetone	67-64-1	10.0	< 10.0	
Acetonitrile	75-05-8	5.00	< 5.00	
Acrolein	107-02-8	5.00	< 5.00	
Acrylonitrile	107-13-1	10.0	< 10.0	
Allyl chloride	107-05-1	5.00	< 5.00	
Benzene	71-43-2	2.00	< 2.00	
Benzyl chloride	100-44-7	5.00	< 5.00	
Bis(2-chloroisopropyl) ether	108-60-1	5.00	< 5.00	
Bromobenzene	108-86-1	2.00	< 2.00	
Bromochloromethane	74-97-5	2.00	< 2.00	
Bromodichloromethane	75-27-4	2.00	< 2.00	
Bromoform	75-25-2	2.00	< 2.00	
Bromomethane	74-83-9	5.00	< 5.00	
Butyl acetate	123-86-4	5.00	< 5.00	
Carbon disulfide	75-15-0	2.00	< 2.00	
Carbon tetrachloride	56-23-5	2.00	< 2.00	
Chlorobenzene	108-90-7	2.00	< 2.00	
Chloroethane	75-00-3	2.00	< 2.00	
Chloroform	67-66-3	2.00	< 2.00	
Chloromethane	74-87-3	5.00	< 5.00	
Chloroprene	126-99-8	2.00	< 2.00	
cis-1,2-Dichloroethene	156-59-2	2.00	< 2.00	
cis-1,3-Dichloropropene	10061-01-5	2.00	< 2.00	
Cyclohexane	110-82-7	2.00	< 2.00	
Cyclohexanone	108-94-1	50.0	< 50.0	
Dibromochloromethane	124-48-1	2.00	< 2.00	

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ORGANIC ANALYTICAL REPORT

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Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-006A
Client Sample ID: Trip Blank
Collection Date: 12/6/2010 1500h
Analyzed: 12/7/2010 0329h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Dibromomethane	74-95-3	2.00	< 2.00	
Dichlorodifluoromethane	75-71-8	2.00	< 2.00	
Ethyl acetate	141-78-6	10.0	< 10.0	
Ethyl ether	60-29-7	10.0	< 10.0	
Ethyl methacrylate	97-63-2	2.00	< 2.00	
Ethylbenzene	100-41-4	2.00	< 2.00	
Hexachlorobutadiene	87-68-3	2.00	< 2.00	
Iodomethane	74-88-4	5.00	< 5.00	
Isobutyl alcohol	78-83-1	100	< 100	
Isopropyl acetate	108-21-4	2.00	< 2.00	
Isopropyl alcohol	67-63-0	25.0	< 25.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
Isopropyltoluene	99-87-6	2.00	< 2.00	
m,p-Xylene	179601-23-1	2.00	< 2.00	
Methacrylonitrile	126-98-7	5.00	< 5.00	
Methyl Acetate	79-20-9	5.00	< 5.00	
Methyl methacrylate	80-62-6	5.00	< 5.00	
Methyl tert-butyl ether	1634-04-4	2.00	< 2.00	
Methylcyclohexane	108-87-2	2.00	< 2.00	
Methylene chloride	75-09-2	2.00	< 2.00	
n-Amyl acetate	628-63-7	2.00	< 2.00	
n-Butyl alcohol	71-36-3	25.0	< 25.0	
n-Butylbenzene	104-51-8	2.00	< 2.00	
n-Hexane	110-54-3	2.00	< 2.00	
n-Octane	111-65-9	2.00	< 2.00	
n-Propylbenzene	103-65-1	2.00	< 2.00	
Naphthalene	91-20-3	2.00	< 2.00	
o-Xylene	95-47-6	2.00	< 2.00	
Pentachloroethane	76-01-7	2.00	< 2.00	

ORGANIC ANALYTICAL REPORT

Client: Utah DEQ DERR
Contact: Jim Harris
Project: Red Butte Spill
Lab Sample ID: 1012109-006A
Client Sample ID: Trip Blank
Collection Date: 12/6/2010 1500h
Analyzed: 12/7/2010 0329h
Received Date: 12/6/2010 1732h
Method Used: EPA624

Analytical Results VOAs Custom List by GC/MS Method 624

Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Propionitrile	107-12-0	25.0	< 25.0	
Propyl acetate	109-60-4	2.00	< 2.00	
sec-Butylbenzene	135-98-8	2.00	< 2.00	
Styrene	100-42-5	2.00	< 2.00	
tert-Butyl alcohol	76-65-0	20.0	< 20.0	
tert-Butylbenzene	98-06-6	2.00	< 2.00	
Tetrachloroethene	127-18-4	2.00	< 2.00	
Tetrahydrofuran	109-99-9	2.00	< 2.00	
Toluene	108-88-3	2.00	< 2.00	
trans-1,2-Dichloroethene	156-60-5	2.00	< 2.00	
trans-1,3-Dichloropropene	10061-02-6	2.00	< 2.00	
trans-1,4-Dichloro-2-butene	110-57-6	2.00	< 2.00	
Trichloroethene	79-01-6	2.00	< 2.00	
Trichlorofluoromethane	75-69-4	2.00	< 2.00	
Vinyl acetate	108-05-4	5.00	< 5.00	
Vinyl chloride	75-01-4	1.00	< 1.00	
Xylenes, Total	1330-20-7	2.00	< 2.00	
TPH C11-C15 (DRO)		20.0	< 20.0	
TPH C6-C10 (GRO)		20.0	< 20.0	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	**113**	
Surr: 4-Bromofluorobenzene	460-00-4	80-123	**105**	
Surr: Dibromofluoromethane	1868-53-7	80-124	**105**	
Surr: Toluene-d8	2037-26-5	80-125	**97.1**	

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: GC
QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-9738	Oil Range Organics (ORO) (C28-	mg/L	SW8015D	0.175	0.1600	0	110	10-200				12/7/2010 0103h
LCS-9738	Surr: C36	%REC	SW8015D	1.43	1.000		143	10-200				12/7/2010 0103h
LCS-9743	Diesel Range Organics C10-C28	mg/L	SW8015D	1.84	2.000	0	92.0	48-118				12/8/2010 0739h
LCS-9743	Surr: 4-Bromofluorobenzene	%REC	SW8015D	0.238	0.4000		59.5	18-95				12/8/2010 0739h

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Jose Rocha
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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: GC
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-9738	Oil Range Organics (ORO) (C28-	mg/L	SW8015D	< 0.0500				-				12/7/2010 0045h
MB-9738	Surr: C36	%REC	SW8015D	1.40	1.000		140	10-200				12/7/2010 0045h
MB-9743	Diesel Range Organics C10-C28	mg/L	SW8015D	< 0.500				-				12/8/2010 0718h
MB-9743	Surr: 4-Bromofluorobenzene	%REC	SW8015D	0.194	0.4000		48.4	18-95				12/8/2010 0718h

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

Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: GC
QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012092-001DMS	Oil Range Organics (ORO) (C28-	mg/L	SW8015D	0.178	0.1633	0	109	10-200				12/7/2010 0140h
1012092-001DMS	Surr: C36	%REC	SW8015D	1.44	1.020		141	10-200				12/7/2010 0140h
1012094-001CMS	Oil Range Organics (ORO) (C28-	mg/L	SW8015D	0.162	0.1633	0	99.0	10-200				12/7/2010 0406h
1012094-001CMS	Surr: C36	%REC	SW8015D	1.25	1.020		122	10-200				12/7/2010 0406h
1012109-002DMS	Oil Range Organics (ORO) (C28-	mg/L	SW8015D	0.328	0.3265	0	100	10-200				12/7/2010 0632h
1012109-002DMS	Surr: C36	%REC	SW8015D	2.56	2.041		125	10-200				12/7/2010 0632h
1012109-002CMS	Diesel Range Organics C10-C28	mg/L	SW8015D	1.57	2.000	0	78.4	60-161				12/8/2010 0843h
1012109-002CMS	Surr: 4-Bromofluorobenzene	%REC	SW8015D	0.155	0.4000		38.7	10-190				12/8/2010 0843h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: GC
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012092-001DMSD	Oil Range Organics (ORO) (C28-	mg/L	SW8015D	0.184	0.1633	0	113	10-200	3.22	30		12/7/2010 0158h
1012092-001DMSD	Surr: C36	%REC	SW8015D	1.41	1.020		138	10-200				12/7/2010 0158h
1012094-001CMSD	Oil Range Organics (ORO) (C28-	mg/L	SW8015D	0.184	0.1633	0	113	10-200	13.2	30		12/7/2010 0424h
1012094-001CMSD	Surr: C36	%REC	SW8015D	1.39	1.020		136	10-200				12/7/2010 0424h
1012109-002DMSD	Oil Range Organics (ORO) (C28-	mg/L	SW8015D	0.341	0.3265	0	104	10-200	3.80	30		12/7/2010 0650h
1012109-002DMSD	Surr: C36	%REC	SW8015D	2.61	2.041		128	10-200				12/7/2010 0650h
1012109-002CMSD	Diesel Range Organics C10-C28	mg/L	SW8015D	1.47	2.000	0	73.4	60-161	6.59	25		12/8/2010 0904h
1012109-002CMSD	Surr: 4-Bromofluorobenzene	%REC	SW8015D	0.142	0.4000		35.4	10-190				12/8/2010 0904h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-9745	1,1´-Biphenyl	µg/L	EPA625	59.6	80.00	0	74.5	22-104				12/7/2010 1943h
LCS-9745	1,2,4,5-Tetrachlorobenzene	µg/L	EPA625	50.8	80.00	0	63.5	13-102				12/7/2010 1943h
LCS-9745	1,2,4-Trichlorobenzene	µg/L	EPA625	39.4	80.00	0	49.3	10-104				12/7/2010 1943h
LCS-9745	1,2-Dichlorobenzene	µg/L	EPA625	30.0	80.00	0	37.6	10-68				12/7/2010 1943h
LCS-9745	1,3,5-Trinitrobenzene	µg/L	EPA625	145	80.00	0	181	18-209				12/7/2010 1943h
LCS-9745	1,3-Dichlorobenzene	µg/L	EPA625	26.8	80.00	0	33.5	10-60				12/7/2010 1943h
LCS-9745	1,3-Dinitrobenzene	µg/L	EPA625	111	80.00	0	139	10-165				12/7/2010 1943h
LCS-9745	1,4-Dichlorobenzene	µg/L	EPA625	27.6	80.00	0	34.6	10-118				12/7/2010 1943h
LCS-9745	1,4-Naphthoquinone	µg/L	EPA625	46.4	80.00	0	58.0	10-187				12/7/2010 1943h
LCS-9745	1,4-Phenylenediamine	µg/L	EPA625	47.0	80.00	0	58.8	10-80				12/7/2010 1943h
LCS-9745	1-Chloronaphthalene	µg/L	EPA625	59.1	80.00	0	73.8	13-123				12/7/2010 1943h
LCS-9745	1-Methylnaphthalene	µg/L	EPA625	28.1	80.00	0	35.1	13-105				12/7/2010 1943h
LCS-9745	1-Naphthylamine	µg/L	EPA625	32.0	80.00	0	40.0	32-256				12/7/2010 1943h
LCS-9745	2,3,4,6-Tetrachlorophenol	µg/L	EPA625	102	80.00	0	127	44-158				12/7/2010 1943h
LCS-9745	2,4,5-Trichlorophenol	µg/L	EPA625	61.0	80.00	0	76.2	46-142				12/7/2010 1943h
LCS-9745	2,4,6-Trichlorophenol	µg/L	EPA625	61.0	80.00	0	76.3	42-113				12/7/2010 1943h
LCS-9745	2,4-Dichlorophenol	µg/L	EPA625	60.7	80.00	0	75.9	37-102				12/7/2010 1943h
LCS-9745	2,4-Dimethylphenol	µg/L	EPA625	62.8	80.00	0	78.5	37-99				12/7/2010 1943h
LCS-9745	2,4-Dinitrophenol	µg/L	EPA625	108	80.00	0	135	10-200				12/7/2010 1943h
LCS-9745	2,4-Dinitrotoluene	µg/L	EPA625	106	80.00	0	133	15-209				12/7/2010 1943h
LCS-9745	2,6-Dichlorophenol	µg/L	EPA625	65.8	80.00	0	82.3	44-111				12/7/2010 1943h
LCS-9745	2,6-Dinitrotoluene	µg/L	EPA625	91.0	80.00	0	114	13-183				12/7/2010 1943h
LCS-9745	2-Acetylaminofluorene	µg/L	EPA625	45.3	80.00	0	56.6	40-131				12/7/2010 1943h
LCS-9745	2-Chloronaphthalene	µg/L	EPA625	51.0	80.00	0	63.8	16-103				12/7/2010 1943h

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Laboratory Director
Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-9745	2-Chlorophenol	µg/L	EPA625	53.1	80.00	0	66.4	21-98				12/7/2010 1943h
LCS-9745	2-Methylnaphthalene	µg/L	EPA625	48.9	80.00	0	61.2	11-92				12/7/2010 1943h
LCS-9745	2-Methylphenol	µg/L	EPA625	26.4	80.00	0	33.0	10-92				12/7/2010 1943h
LCS-9745	2-Naphthylamine	µg/L	EPA625	34.5	80.00	0	43.2	36-193				12/7/2010 1943h
LCS-9745	2-Nitroaniline	µg/L	EPA625	102	80.00	0	128	10-216				12/7/2010 1943h
LCS-9745	2-Nitrophenol	µg/L	EPA625	74.1	80.00	0	92.6	10-173				12/7/2010 1943h
LCS-9745	2-Picoline	µg/L	EPA625	13.9	80.00	0	17.3	10-66				12/7/2010 1943h
LCS-9745	3&4-Methylphenol	µg/L	EPA625	56.5	80.00	0	70.6	10-88				12/7/2010 1943h
LCS-9745	3,3´-Dichlorobenzidine	µg/L	EPA625	77.0	80.00	0	96.3	38-131				12/7/2010 1943h
LCS-9745	3,3´-Dimethylbenzidine	µg/L	EPA625	36.4	80.00	0	45.5	10-172				12/7/2010 1943h
LCS-9745	3-Methylcholanthrene	µg/L	EPA625	84.5	80.00	0	106	48-206				12/7/2010 1943h
LCS-9745	3-Nitroaniline	µg/L	EPA625	83.6	80.00	0	105	31-172				12/7/2010 1943h
LCS-9745	4,6-Dinitro-2-methylphenol	µg/L	EPA625	135	80.00	0	169	10-190				12/7/2010 1943h
LCS-9745	4-Aminobiphenyl	µg/L	EPA625	77.1	80.00	0	96.4	10-202				12/7/2010 1943h
LCS-9745	4-Bromophenyl phenyl ether	µg/L	EPA625	76.7	80.00	0	95.9	55-136				12/7/2010 1943h
LCS-9745	4-Chloro-3-methylphenol	µg/L	EPA625	73.6	80.00	0	92.0	47-113				12/7/2010 1943h
LCS-9745	4-Chloroaniline	µg/L	EPA625	52.6	80.00	0	65.8	24-124				12/7/2010 1943h
LCS-9745	4-Chlorophenyl phenyl ether	µg/L	EPA625	71.3	80.00	0	89.1	41-119				12/7/2010 1943h
LCS-9745	4-Nitroaniline	µg/L	EPA625	78.9	80.00	0	98.6	27-159				12/7/2010 1943h
LCS-9745	4-Nitrophenol	µg/L	EPA625	23.6	80.00	0	29.5	10-157				12/7/2010 1943h
LCS-9745	5-Nitro-o-toluidine	µg/L	EPA625	99.7	80.00	0	125	60-168				12/7/2010 1943h
LCS-9745	7,12-Dimethylbenz(a)anthracene	µg/L	EPA625	44.6	80.00	0	55.7	42-277				12/7/2010 1943h
LCS-9745	a,a-Dimethylphenethylamine	µg/L	EPA625	12.6	80.00	0	15.7	10-160				12/7/2010 1943h
LCS-9745	Acenaphthene	µg/L	EPA625	69.0	80.00	0	86.3	29-112				12/7/2010 1943h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-9745	Acenaphthylene	µg/L	EPA625	65.3	80.00	0	81.6	31-116				12/7/2010 1943h
LCS-9745	Acetophenone	µg/L	EPA625	50.8	80.00	0	63.5	10-105				12/7/2010 1943h
LCS-9745	alpha-Terpineol	µg/L	EPA625	69.0	80.00	0	86.2	14-98				12/7/2010 1943h
LCS-9745	Aniline	µg/L	EPA625	17.5	80.00	0	21.9	10-94				12/7/2010 1943h
LCS-9745	Anthracene	µg/L	EPA625	86.3	80.00	0	108	64-145				12/7/2010 1943h
LCS-9745	Aramite	µg/L	EPA625	59.7	80.00	0	74.6	46-162				12/7/2010 1943h
LCS-9745	Azobenzene	µg/L	EPA625	65.1	80.00	0	81.4	32-117				12/7/2010 1943h
LCS-9745	Benz(a)anthracene	µg/L	EPA625	77.5	80.00	0	96.9	50-134				12/7/2010 1943h
LCS-9745	Benzidine	µg/L	EPA625	31.2	80.00	0	39.0	10-211				12/7/2010 1943h
LCS-9745	Benzo(a)pyrene	µg/L	EPA625	101	80.00	0	126	39-152				12/7/2010 1943h
LCS-9745	Benzo(b)fluoranthene	µg/L	EPA625	81.7	80.00	0	102	46-256				12/7/2010 1943h
LCS-9745	Benzo(g,h,i)perylene	µg/L	EPA625	72.1	80.00	0	90.1	21-288				12/7/2010 1943h
LCS-9745	Benzo(k)fluoranthene	µg/L	EPA625	99.9	80.00	0	125	10-254				12/7/2010 1943h
LCS-9745	Benzoic acid	µg/L	EPA625	< 20.0	80.00	0	16.6	10-64				12/7/2010 1943h
LCS-9745	Benzyl alcohol	µg/L	EPA625	25.6	80.00	0	31.9	10-88				12/7/2010 1943h
LCS-9745	Bis(2-chloroethoxy)methane	µg/L	EPA625	36.2	80.00	0	45.3	10-98				12/7/2010 1943h
LCS-9745	Bis(2-chloroethyl) ether	µg/L	EPA625	36.0	80.00	0	45.0	10-99				12/7/2010 1943h
LCS-9745	Bis(2-chloroisopropyl) ether	µg/L	EPA625	35.7	80.00	0	44.6	10-92				12/7/2010 1943h
LCS-9745	Bis(2-ethylhexyl) phthalate	µg/L	EPA625	88.3	80.00	0	110	10-233				12/7/2010 1943h
LCS-9745	bis(2-ethylhexyl)adipate	µg/L	EPA625	88.0	80.00	0	110	10-200				12/7/2010 1943h
LCS-9745	Butyl benzyl phthalate	µg/L	EPA625	85.0	80.00	0	106	10-178				12/7/2010 1943h
LCS-9745	Carbazole	µg/L	EPA625	89.9	80.00	0	112	61-140				12/7/2010 1943h
LCS-9745	Chlorobenzilate	µg/L	EPA625	75.1	80.00	0	93.8	10-218				12/7/2010 1943h
LCS-9745	Chrysene	µg/L	EPA625	83.4	80.00	0	104	54-130				12/7/2010 1943h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-9745	Diallate (cis or trans)	µg/L	EPA625	71.6	80.00	0	89.4	41-132				12/7/2010 1943h
LCS-9745	Dibenz(a,h)anthracene	µg/L	EPA625	76.4	80.00	0	95.6	27-199				12/7/2010 1943h
LCS-9745	Dibenzofuran	µg/L	EPA625	66.7	80.00	0	83.4	38-117				12/7/2010 1943h
LCS-9745	Diethyl phthalate	µg/L	EPA625	74.3	80.00	0	92.9	20-128				12/7/2010 1943h
LCS-9745	Dimethoate	µg/L	EPA625	13.6	80.00	0	17.1	10-60				12/7/2010 1943h
LCS-9745	Dimethyl phthalate	µg/L	EPA625	55.2	80.00	0	69.0	10-105				12/7/2010 1943h
LCS-9745	Dimethylaminoazobenzene	µg/L	EPA625	80.7	80.00	0	101	30-151				12/7/2010 1943h
LCS-9745	Di-n-butyl phthalate	µg/L	EPA625	87.5	80.00	0	109	45-131				12/7/2010 1943h
LCS-9745	Di-n-octyl phthalate	µg/L	EPA625	106	80.00	0	133	10-252				12/7/2010 1943h
LCS-9745	Dinoseb	µg/L	EPA625	146	80.00	0	183	10-186				12/7/2010 1943h
LCS-9745	Diphenylamine	µg/L	EPA625	76.4	80.00	0	95.5	46-128				12/7/2010 1943h
LCS-9745	Disulfoton	µg/L	EPA625	69.4	80.00	0	86.7	10-124				12/7/2010 1943h
LCS-9745	Ethyl methanesulfonate	µg/L	EPA625	44.7	80.00	0	55.9	10-105				12/7/2010 1943h
LCS-9745	Famphur	µg/L	EPA625	176	80.00	0	220	10-298				12/7/2010 1943h
LCS-9745	Fluoranthene	µg/L	EPA625	88.2	80.00	0	110	61-138				12/7/2010 1943h
LCS-9745	Fluorene	µg/L	EPA625	74.7	80.00	0	93.4	45-116				12/7/2010 1943h
LCS-9745	Hexachlorobenzene	µg/L	EPA625	77.0	80.00	0	96.3	55-135				12/7/2010 1943h
LCS-9745	Hexachlorobutadiene	µg/L	EPA625	33.3	80.00	0	41.7	10-79				12/7/2010 1943h
LCS-9745	Hexachlorocyclopentadiene	µg/L	EPA625	20.6	80.00	0	25.8	10-104				12/7/2010 1943h
LCS-9745	Hexachloroethane	µg/L	EPA625	27.5	80.00	0	34.4	10-58				12/7/2010 1943h
LCS-9745	Hexachlorophene	µg/L	EPA625	44.2	80.00	0	55.3	10-242				12/7/2010 1943h
LCS-9745	Hexachloropropene	µg/L	EPA625	27.3	80.00	0	34.2	10-79				12/7/2010 1943h
LCS-9745	Indene	µg/L	EPA625	32.2	80.00	0	40.2	10-71				12/7/2010 1943h
LCS-9745	Indeno(1,2,3-cd)pyrene	µg/L	EPA625	75.6	80.00	0	94.4	29-208				12/7/2010 1943h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-9745	Isodrin	µg/L	EPA625	85.5	80.00	0	107	58-140				12/7/2010 1943h
LCS-9745	Isophorone	µg/L	EPA625	52.3	80.00	0	65.3	10-105				12/7/2010 1943h
LCS-9745	Isosafrole	µg/L	EPA625	51.9	80.00	0	64.8	12-108				12/7/2010 1943h
LCS-9745	Kepone	µg/L	EPA625	111	80.00	0	139	10-330				12/7/2010 1943h
LCS-9745	Methapyrilene	µg/L	EPA625	44.0	80.00	0	55.1	17-151				12/7/2010 1943h
LCS-9745	Methyl methanesulfonate	µg/L	EPA625	53.2	80.00	0	66.5	10-107				12/7/2010 1943h
LCS-9745	Naphthalene	µg/L	EPA625	44.2	80.00	0	55.2	10-79				12/7/2010 1943h
LCS-9745	n-Decane	µg/L	EPA625	18.7	80.00	0	23.4	10-45				12/7/2010 1943h
LCS-9745	Nitrobenzene	µg/L	EPA625	54.6	80.00	0	68.2	10-104				12/7/2010 1943h
LCS-9745	Nitroquinoline-1-oxide	µg/L	EPA625	33.2	80.00	0	41.6	10-165				12/7/2010 1943h
LCS-9745	N-Nitrosodiethylamine	µg/L	EPA625	42.2	80.00	0	52.8	10-96				12/7/2010 1943h
LCS-9745	N-Nitrosodimethylamine	µg/L	EPA625	15.2	80.00	0	19.1	10-55				12/7/2010 1943h
LCS-9745	N-Nitrosodi-n-butylamine	µg/L	EPA625	66.6	80.00	0	83.3	21-104				12/7/2010 1943h
LCS-9745	N-Nitrosodiphenylamine	µg/L	EPA625	79.1	80.00	0	98.9	45-126				12/7/2010 1943h
LCS-9745	N-Nitrosodi-n-propylamine	µg/L	EPA625	48.9	80.00	0	61.2	10-103				12/7/2010 1943h
LCS-9745	N-Nitrosomethylethylamine	µg/L	EPA625	32.0	80.00	0	40.0	10-84				12/7/2010 1943h
LCS-9745	N-Nitrosomorpholine	µg/L	EPA625	54.3	80.00	0	67.9	15-107				12/7/2010 1943h
LCS-9745	N-Nitrosopiperidine	µg/L	EPA625	54.1	80.00	0	67.6	10-108				12/7/2010 1943h
LCS-9745	N-Nitrosopyrrolidine	µg/L	EPA625	60.8	80.00	0	76.0	19-115				12/7/2010 1943h
LCS-9745	n-Octadecane	µg/L	EPA625	67.8	80.00	0	84.8	27-134				12/7/2010 1943h
LCS-9745	O,O,O-Triethyl phosphorothioate	µg/L	EPA625	52.8	80.00	0	66.0	10-129				12/7/2010 1943h
LCS-9745	o-Toluidine	µg/L	EPA625	46.8	80.00	0	58.4	21-225				12/7/2010 1943h
LCS-9745	Parathion	µg/L	EPA625	11.9	80.00	0	14.9	10-165				12/7/2010 1943h
LCS-9745	Methyl parathion	µg/L	EPA625	115	80.00	0	144	10-165				12/7/2010 1943h

AMERICAN WEST ANALYTICAL LABORATORIES
463 West 3600 South
Salt Lake City, UT 84115
(801) 263-8686, Toll Free (888) 263-8686, Fax (801) 263-8687
e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-9745	Pentachlorobenzene	µg/L	EPA625	66.0	80.00	0	82.5	41-118				12/7/2010 1943h
LCS-9745	Pentachloronitrobenzene	µg/L	EPA625	88.3	80.00	0	110	35-185				12/7/2010 1943h
LCS-9745	Pentachlorophenol	µg/L	EPA625	74.3	80.00	0	92.9	14-144				12/7/2010 1943h
LCS-9745	Phenacetin	µg/L	EPA625	78.0	80.00	0	97.4	42-163				12/7/2010 1943h
LCS-9745	Phenanthrene	µg/L	EPA625	94.7	80.00	0	118	25-135				12/7/2010 1943h
LCS-9745	Phenol	µg/L	EPA625	29.4	80.00	0	36.7	10-53				12/7/2010 1943h
LCS-9745	Phorate	µg/L	EPA625	86.6	80.00	0	108	36-158				12/7/2010 1943h
LCS-9745	Pronamide	µg/L	EPA625	44.4	80.00	0	55.5	33-137				12/7/2010 1943h
LCS-9745	Pyrene	µg/L	EPA625	86.4	80.00	0	108	42-145				12/7/2010 1943h
LCS-9745	Pyridine	µg/L	EPA625	< 10.0	80.00	0	6.21	10-37			~	12/7/2010 1943h
LCS-9745	Quinoline	µg/L	EPA625	59.4	80.00	0	74.2	13-111				12/7/2010 1943h
LCS-9745	Safrole	µg/L	EPA625	59.1	80.00	0	73.9	24-111				12/7/2010 1943h
LCS-9745	Tetraethyl dithiopyrophosphate	µg/L	EPA625	79.8	80.00	0	99.7	52-138				12/7/2010 1943h
LCS-9745	Thionazin	µg/L	EPA625	72.6	80.00	0	90.8	45-123				12/7/2010 1943h
LCS-9745	Surr: 2,4,6-Tribromophenol	%REC	EPA625	78.2	80.00		97.8	64-130				12/7/2010 1943h
LCS-9745	Surr: 2-Fluorobiphenyl	%REC	EPA625	28.2	40.00		70.6	32-128				12/7/2010 1943h
LCS-9745	Surr: 2-Fluorophenol	%REC	EPA625	31.7	80.00		39.6	10-121				12/7/2010 1943h
LCS-9745	Surr: Nitrobenzene-d5	%REC	EPA625	24.4	40.00		61.1	17-133				12/7/2010 1943h
LCS-9745	Surr: Phenol-d6	%REC	EPA625	21.9	80.00		27.3	10-124				12/7/2010 1943h
LCS-9745	Surr: Terphenyl-d14	%REC	EPA625	41.8	40.00		104	51-221				12/7/2010 1943h
LCS-9745	Acenaphthene	µg/L	SW8270D	69.0	80.00	0	86.3	20-116				12/7/2010 1943h
LCS-9745	Benzo(a)pyrene	µg/L	SW8270D	101	80.00	0	126	39-152				12/7/2010 1943h
LCS-9745	Pyrene	µg/L	SW8270D	86.4	80.00	0	108	37-138				12/7/2010 1943h
LCS-9745	Surr: 2,4,6-Tribromophenol	%REC	SW8270D	78.2	80.00		97.8	10-165				12/7/2010 1943h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-9745	Surr: 2-Fluorobiphenyl	%REC	SW8270D	28.2	40.00		70.6	32-128				12/7/2010 1943h
LCS-9745	Surr: 2-Fluorophenol	%REC	SW8270D	31.7	80.00		39.6	10-121				12/7/2010 1943h
LCS-9745	Surr: Nitrobenzene-d5	%REC	SW8270D	24.4	40.00		61.1	17-133				12/7/2010 1943h
LCS-9745	Surr: Phenol-d6	%REC	SW8270D	21.9	80.00		27.3	10-124				12/7/2010 1943h
LCS-9745	Surr: Terphenyl-d14	%REC	SW8270D	41.8	40.00		104	51-221				12/7/2010 1943h

~ - LCS outliers are not target compounds for method 625 but are provided by AWAL as an additional service.

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-9745	1,1´-Biphenyl	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	1,2,4,5-Tetrachlorobenzene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	1,2,4-Trichlorobenzene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	1,2-Dichlorobenzene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	1,3,5-Trinitrobenzene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	1,3-Dichlorobenzene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	1,3-Dinitrobenzene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	1,4-Dichlorobenzene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	1,4-Naphthoquinone	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	1,4-Phenylenediamine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	1-Chloronaphthalene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	1-Methylnaphthalene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	1-Naphthylamine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	2,3,4,6-Tetrachlorophenol	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	2,4,5-Trichlorophenol	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	2,4,6-Trichlorophenol	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	2,4-Dichlorophenol	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	2,4-Dimethylphenol	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	2,4-Dinitrophenol	µg/L	EPA625	< 20.0				-				12/7/2010 1915h
MB-9745	2,4-Dinitrotoluene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	2,6-Dichlorophenol	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	2,6-Dinitrotoluene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	2-Acetylaminofluorene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	2-Chloronaphthalene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h

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QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-9745	2-Chlorophenol	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	2-Methylnaphthalene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	2-Methylphenol	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	2-Naphthylamine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	2-Nitroaniline	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	2-Nitrophenol	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	2-Picoline	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	3&4-Methylphenol	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	3,3´-Dichlorobenzidine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	3,3´-Dimethylbenzidine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	3-Methylcholanthrene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	3-Nitroaniline	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	4,6-Dinitro-2-methylphenol	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	4-Aminobiphenyl	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	4-Bromophenyl phenyl ether	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	4-Chloro-3-methylphenol	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	4-Chloroaniline	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	4-Chlorophenyl phenyl ether	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	4-Nitroaniline	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	4-Nitrophenol	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	5-Nitro-o-toluidine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	7,12-Dimethylbenz(a)anthracene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	a,a-Dimethylphenethylamine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Acenaphthene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-9745	Acenaphthylene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Acetophenone	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	alpha-Terpineol	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Aniline	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Anthracene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Aramite	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Azobenzene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Benz(a)anthracene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Benzidine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Benzo(a)pyrene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Benzo(b)fluoranthene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Benzo(g,h,i)perylene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Benzo(k)fluoranthene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Benzoic acid	µg/L	EPA625	< 20.0				-				12/7/2010 1915h
MB-9745	Benzyl alcohol	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Bis(2-chloroethoxy)methane	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Bis(2-chloroethyl) ether	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Bis(2-chloroisopropyl) ether	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Bis(2-ethylhexyl) phthalate	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	bis(2-ethylhexyl)adipate	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Butyl benzyl phthalate	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Carbazole	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Chlorobenzilate	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Chrysene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

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QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-9745	Diallate (cis or trans)	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Dibenz(a,h)anthracene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Dibenzofuran	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Diethyl phthalate	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Dimethoate	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Dimethyl phthalate	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Dimethylaminoazobenzene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Di-n-butyl phthalate	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Di-n-octyl phthalate	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Dinoseb	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Diphenylamine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Disulfoton	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Ethyl methanesulfonate	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Famphur	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Fluoranthene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Fluorene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Hexachlorobenzene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Hexachlorobutadiene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Hexachlorocyclopentadiene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Hexachloroethane	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Hexachlorophene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Hexachloropropene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Indene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Indeno(1,2,3-cd)pyrene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h

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QC SUMMARY REPORT

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QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-9745	Isodrin	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Isophorone	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Isosafrole	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Kepone	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Methapyrilene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Methyl methanesulfonate	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Naphthalene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	n-Decane	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Nitrobenzene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Nitroquinoline-1-oxide	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	N-Nitrosodiethylamine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	N-Nitrosodimethylamine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	N-Nitrosodi-n-butylamine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	N-Nitrosodiphenylamine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	N-Nitrosodi-n-propylamine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	N-Nitrosomethylethylamine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	N-Nitrosomorpholine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	N-Nitrosopiperidine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	N-Nitrosopyrrolidine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	n-Octadecane	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	O,O,O-Triethyl phosphorothioate	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	o-Toluidine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Parathion	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Methyl parathion	µg/L	EPA625	< 10.0				-				12/7/2010 1915h

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QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-9745	Pentachlorobenzene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Pentachloronitrobenzene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Pentachlorophenol	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Phenacetin	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Phenanthrene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Phenol	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Phorate	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Pronamide	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Pyrene	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Pyridine	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Quinoline	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Safrole	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Tetraethyl dithiopyrophosphate	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Thionazin	µg/L	EPA625	< 10.0				-				12/7/2010 1915h
MB-9745	Surr: 2,4,6-Tribromophenol	%REC	EPA625	54.2	80.00		67.7	10-165				12/7/2010 1915h
MB-9745	Surr: 2-Fluorobiphenyl	%REC	EPA625	31.9	40.00		79.7	18-113				12/7/2010 1915h
MB-9745	Surr: 2-Fluorophenol	%REC	EPA625	37.0	80.00		46.2	10-121				12/7/2010 1915h
MB-9745	Surr: Nitrobenzene-d5	%REC	EPA625	23.9	40.00		59.7	17-133				12/7/2010 1915h
MB-9745	Surr: Phenol-d6	%REC	EPA625	20.2	80.00		25.2	10-124				12/7/2010 1915h
MB-9745	Surr: Terphenyl-d14	%REC	EPA625	36.8	40.00		91.9	28-163				12/7/2010 1915h
MB-9745	Acenaphthene	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	Acenaphthylene	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	Anthracene	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	Benz(a)anthracene	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h

AMERICAN WEST ANALYTICAL LABORATORIES
463 West 3600 South
Salt Lake City, UT 84115
(801) 263-8686, Toll Free (888) 263-8686, Fax (801) 263-8687
e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-9745	Benzo(a)pyrene	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	Benzo(b)fluoranthene	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	Benzo(g,h,i)perylene	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	Benzo(k)fluoranthene	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	C11-C12 Aliphatic hydrocarbons	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	C11-C13 Alkyl Naphthalenes	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	C13-C16 Aliphatic hydrocarbons	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	C17-C21 Aliphatic hydrocarbons	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	C22-C35 Aliphatic hydrocarbons	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	Chrysene	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	Dibenz(a,h)anthracene	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	Fluoranthene	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	Fluorene	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	Indeno(1,2,3-cd)pyrene	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	Phenanthrene	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	Pyrene	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	Total C12-C22 PAH**	µg/L	SW8270D	< 10.0				-				12/7/2010 1915h
MB-9745	Surr: 2,4,6-Tribromophenol	%REC	SW8270D	54.2	80.00		67.7	10-165				12/7/2010 1915h
MB-9745	Surr: 2-Fluorobiphenyl	%REC	SW8270D	31.9	40.00		79.7	18-113				12/7/2010 1915h
MB-9745	Surr: 2-Fluorophenol	%REC	SW8270D	37.0	80.00		46.2	10-121				12/7/2010 1915h
MB-9745	Surr: Nitrobenzene-d5	%REC	SW8270D	23.9	40.00		59.7	17-133				12/7/2010 1915h
MB-9745	Surr: Phenol-d6	%REC	SW8270D	20.2	80.00		25.2	10-124				12/7/2010 1915h
MB-9745	Surr: Terphenyl-d14	%REC	SW8270D	36.8	40.00		91.9	28-163				12/7/2010 1915h

*** - This value is a summation of the PAH compounds listed above.*

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QC SUMMARY REPORT

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Lab Set ID: 1012109
Project: Red Butte Spill

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QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-002BMS	1,1´-Biphenyl	µg/L	EPA625	47.1	84.21	0	55.9	27-99				12/7/2010 2107h
1012109-002BMS	1,2,4,5-Tetrachlorobenzene	µg/L	EPA625	38.3	84.21	0	45.5	10-119				12/7/2010 2107h
1012109-002BMS	1,2,4-Trichlorobenzene	µg/L	EPA625	27.7	84.21	0	32.9	10-79				12/7/2010 2107h
1012109-002BMS	1,2-Dichlorobenzene	µg/L	EPA625	19.7	84.21	0	23.4	10-59				12/7/2010 2107h
1012109-002BMS	1,3,5-Trinitrobenzene	µg/L	EPA625	164	84.21	0	194	10-175			1	12/7/2010 2107h
1012109-002BMS	1,3-Dichlorobenzene	µg/L	EPA625	16.5	84.21	0	19.6	10-56				12/7/2010 2107h
1012109-002BMS	1,3-Dinitrobenzene	µg/L	EPA625	108	84.21	0	128	10-175				12/7/2010 2107h
1012109-002BMS	1,4-Dichlorobenzene	µg/L	EPA625	17.6	84.21	0	20.9	10-58				12/7/2010 2107h
1012109-002BMS	1,4-Naphthoquinone	µg/L	EPA625	43.2	84.21	0	51.4	10-177				12/7/2010 2107h
1012109-002BMS	1,4-Phenylenediamine	µg/L	EPA625	34.6	84.21	0	41.1	10-124				12/7/2010 2107h
1012109-002BMS	1-Chloronaphthalene	µg/L	EPA625	42.1	84.21	0	50.0	10-106				12/7/2010 2107h
1012109-002BMS	1-Methylnaphthalene	µg/L	EPA625	20.8	84.21	0	24.7	10-83				12/7/2010 2107h
1012109-002BMS	1-Naphthylamine	µg/L	EPA625	32.3	84.21	0	38.4	10-122				12/7/2010 2107h
1012109-002BMS	2,3,4,6-Tetrachlorophenol	µg/L	EPA625	71.3	84.21	0	84.6	10-157				12/7/2010 2107h
1012109-002BMS	2,4,5-Trichlorophenol	µg/L	EPA625	56.4	84.21	0	67.0	10-148				12/7/2010 2107h
1012109-002BMS	2,4,6-Trichlorophenol	µg/L	EPA625	58.2	84.21	0	69.1	10-136				12/7/2010 2107h
1012109-002BMS	2,4-Dichlorophenol	µg/L	EPA625	58.3	84.21	0	69.3	10-123				12/7/2010 2107h
1012109-002BMS	2,4-Dimethylphenol	µg/L	EPA625	58.6	84.21	0	69.6	10-113				12/7/2010 2107h
1012109-002BMS	2,4-Dinitrophenol	µg/L	EPA625	106	84.21	0	125	10-175				12/7/2010 2107h
1012109-002BMS	2,4-Dinitrotoluene	µg/L	EPA625	104	84.21	0	123	10-175				12/7/2010 2107h
1012109-002BMS	2,6-Dichlorophenol	µg/L	EPA625	64.0	84.21	0	76.0	10-148				12/7/2010 2107h
1012109-002BMS	2,6-Dinitrotoluene	µg/L	EPA625	86.4	84.21	0	103	10-175				12/7/2010 2107h
1012109-002BMS	2-Acetylaminofluorene	µg/L	EPA625	44.7	84.21	0	53.1	10-94				12/7/2010 2107h
1012109-002BMS	2-Chloronaphthalene	µg/L	EPA625	41.5	84.21	0	49.3	10-93				12/7/2010 2107h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-002BMS	2-Chlorophenol	µg/L	EPA625	48.3	84.21	0	57.4	10-92				12/7/2010 2107h
1012109-002BMS	2-Methylnaphthalene	µg/L	EPA625	37.5	84.21	0	44.5	15-78				12/7/2010 2107h
1012109-002BMS	2-Methylphenol	µg/L	EPA625	24.1	84.21	0	28.6	10-83				12/7/2010 2107h
1012109-002BMS	2-Naphthylamine	µg/L	EPA625	33.7	84.21	0	40.1	10-154				12/7/2010 2107h
1012109-002BMS	2-Nitroaniline	µg/L	EPA625	95.8	84.21	0	114	10-175				12/7/2010 2107h
1012109-002BMS	2-Nitrophenol	µg/L	EPA625	71.5	84.21	0	84.9	10-175				12/7/2010 2107h
1012109-002BMS	2-Picoline	µg/L	EPA625	< 10.5	84.21	0	12.0	10-61				12/7/2010 2107h
1012109-002BMS	3&4-Methylphenol	µg/L	EPA625	49.0	84.21	0	58.2	10-80				12/7/2010 2107h
1012109-002BMS	3,3´-Dichlorobenzidine	µg/L	EPA625	76.0	84.21	0	90.3	10-150				12/7/2010 2107h
1012109-002BMS	3,3´-Dimethylbenzidine	µg/L	EPA625	45.7	84.21	0	54.2	10-143				12/7/2010 2107h
1012109-002BMS	3-Methylcholanthrene	µg/L	EPA625	81.8	84.21	0	97.1	32-171				12/7/2010 2107h
1012109-002BMS	3-Nitroaniline	µg/L	EPA625	81.5	84.21	0	96.8	10-175				12/7/2010 2107h
1012109-002BMS	4,6-Dinitro-2-methylphenol	µg/L	EPA625	141	84.21	0	167	10-175				12/7/2010 2107h
1012109-002BMS	4-Aminobiphenyl	µg/L	EPA625	78.5	84.21	0	93.2	10-175				12/7/2010 2107h
1012109-002BMS	4-Bromophenyl phenyl ether	µg/L	EPA625	71.7	84.21	0	85.2	16-138				12/7/2010 2107h
1012109-002BMS	4-Chloro-3-methylphenol	µg/L	EPA625	74.9	84.21	0	88.9	10-131				12/7/2010 2107h
1012109-002BMS	4-Chloroaniline	µg/L	EPA625	47.0	84.21	0	55.9	10-98				12/7/2010 2107h
1012109-002BMS	4-Chlorophenyl phenyl ether	µg/L	EPA625	63.4	84.21	0	75.3	31-108				12/7/2010 2107h
1012109-002BMS	4-Nitroaniline	µg/L	EPA625	74.1	84.21	0	88.0	10-175				12/7/2010 2107h
1012109-002BMS	4-Nitrophenol	µg/L	EPA625	28.1	84.21	0	33.4	10-97				12/7/2010 2107h
1012109-002BMS	5-Nitro-o-toluidine	µg/L	EPA625	95.5	84.21	0	113	10-175				12/7/2010 2107h
1012109-002BMS	7,12-Dimethylbenz(a)anthracene	µg/L	EPA625	43.8	84.21	0	52.0	26-174				12/7/2010 2107h
1012109-002BMS	a,a-Dimethylphenethylamine	µg/L	EPA625	27.1	84.21	0	32.2	10-175				12/7/2010 2107h
1012109-002BMS	Acenaphthene	µg/L	EPA625	58.0	84.21	0	68.9	29-97				12/7/2010 2107h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-002BMS	Acenaphthylene	µg/L	EPA625	57.1	84.21	0	67.8	37-87				12/7/2010 2107h
1012109-002BMS	Acetophenone	µg/L	EPA625	40.0	84.21	0	47.5	10-96				12/7/2010 2107h
1012109-002BMS	alpha-Terpineol	µg/L	EPA625	56.7	84.21	0	67.4	10-67			1	12/7/2010 2107h
1012109-002BMS	Aniline	µg/L	EPA625	14.1	84.21	0	16.8	10-71				12/7/2010 2107h
1012109-002BMS	Anthracene	µg/L	EPA625	83.3	84.21	0	99.0	53-114				12/7/2010 2107h
1012109-002BMS	Aramite	µg/L	EPA625	58.0	84.21	0	68.9	29-160				12/7/2010 2107h
1012109-002BMS	Azobenzene	µg/L	EPA625	61.4	84.21	0	72.9	15-114				12/7/2010 2107h
1012109-002BMS	Benz(a)anthracene	µg/L	EPA625	74.9	84.21	0	88.9	39-129				12/7/2010 2107h
1012109-002BMS	Benzidine	µg/L	EPA625	50.6	84.21	0	60.1	10-99				12/7/2010 2107h
1012109-002BMS	Benzo(a)pyrene	µg/L	EPA625	98.0	84.21	0	116	29-175				12/7/2010 2107h
1012109-002BMS	Benzo(b)fluoranthene	µg/L	EPA625	74.5	84.21	0	88.4	15-140				12/7/2010 2107h
1012109-002BMS	Benzo(g,h,i)perylene	µg/L	EPA625	70.6	84.21	0	83.8	10-182				12/7/2010 2107h
1012109-002BMS	Benzo(k)fluoranthene	µg/L	EPA625	105	84.21	0	125	21-154				12/7/2010 2107h
1012109-002BMS	Benzoic acid	µg/L	EPA625	< 21.1	84.21	0	18.2	10-71				12/7/2010 2107h
1012109-002BMS	Benzyl alcohol	µg/L	EPA625	18.7	84.21	0	22.2	10-69				12/7/2010 2107h
1012109-002BMS	Bis(2-chloroethoxy)methane	µg/L	EPA625	39.0	84.21	0	46.3	10-94				12/7/2010 2107h
1012109-002BMS	Bis(2-chloroethyl) ether	µg/L	EPA625	27.5	84.21	0	32.7	10-70				12/7/2010 2107h
1012109-002BMS	Bis(2-chloroisopropyl) ether	µg/L	EPA625	28.2	84.21	0	33.5	10-71				12/7/2010 2107h
1012109-002BMS	Bis(2-ethylhexyl) phthalate	µg/L	EPA625	82.3	84.21	0	97.7	10-175				12/7/2010 2107h
1012109-002BMS	bis(2-ethylhexyl)adipate	µg/L	EPA625	84.2	84.21	0	100	10-175				12/7/2010 2107h
1012109-002BMS	Butyl benzyl phthalate	µg/L	EPA625	81.9	84.21	0	97.2	10-175				12/7/2010 2107h
1012109-002BMS	Carbazole	µg/L	EPA625	87.5	84.21	0	104	10-151				12/7/2010 2107h
1012109-002BMS	Chlorobenzilate	µg/L	EPA625	74.5	84.21	0	88.5	18-175				12/7/2010 2107h
1012109-002BMS	Chrysene	µg/L	EPA625	82.8	84.21	0	98.4	38-133				12/7/2010 2107h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-002BMS	Diallate (cis or trans)	µg/L	EPA625	68.5	84.21	0	81.4	10-157				12/7/2010 2107h
1012109-002BMS	Dibenz(a,h)anthracene	µg/L	EPA625	74.5	84.21	0	88.5	13-168				12/7/2010 2107h
1012109-002BMS	Dibenzofuran	µg/L	EPA625	59.3	84.21	0	70.5	29-103				12/7/2010 2107h
1012109-002BMS	Diethyl phthalate	µg/L	EPA625	70.0	84.21	0	83.1	10-139				12/7/2010 2107h
1012109-002BMS	Dimethoate	µg/L	EPA625	21.7	84.21	0	25.8	10-136				12/7/2010 2107h
1012109-002BMS	Dimethyl phthalate	µg/L	EPA625	53.0	84.21	0	62.9	10-122				12/7/2010 2107h
1012109-002BMS	Dimethylaminoazobenzene	µg/L	EPA625	76.2	84.21	0	90.5	34-142				12/7/2010 2107h
1012109-002BMS	Di-n-butyl phthalate	µg/L	EPA625	85.6	84.21	0	102	44-124				12/7/2010 2107h
1012109-002BMS	Di-n-octyl phthalate	µg/L	EPA625	104	84.21	0	124	10-175				12/7/2010 2107h
1012109-002BMS	Dinoseb	µg/L	EPA625	146	84.21	0	173	10-175				12/7/2010 2107h
1012109-002BMS	Diphenylamine	µg/L	EPA625	73.0	84.21	0	86.7	13-110				12/7/2010 2107h
1012109-002BMS	Disulfoton	µg/L	EPA625	67.5	84.21	0	80.1	10-121				12/7/2010 2107h
1012109-002BMS	Ethyl methanesulfonate	µg/L	EPA625	36.3	84.21	0	43.1	10-99				12/7/2010 2107h
1012109-002BMS	Famphur	µg/L	EPA625	150	84.21	0	179	10-71			1	12/7/2010 2107h
1012109-002BMS	Fluoranthene	µg/L	EPA625	86.4	84.21	0	103	23-135				12/7/2010 2107h
1012109-002BMS	Fluorene	µg/L	EPA625	67.0	84.21	0	79.6	34-108				12/7/2010 2107h
1012109-002BMS	Hexachlorobenzene	µg/L	EPA625	72.0	84.21	0	85.5	26-131				12/7/2010 2107h
1012109-002BMS	Hexachlorobutadiene	µg/L	EPA625	21.4	84.21	0	25.4	10-110				12/7/2010 2107h
1012109-002BMS	Hexachlorocyclopentadiene	µg/L	EPA625	12.2	84.21	0	14.5	10-45				12/7/2010 2107h
1012109-002BMS	Hexachloroethane	µg/L	EPA625	16.5	84.21	0	19.6	10-58				12/7/2010 2107h
1012109-002BMS	Hexachlorophene	µg/L	EPA625	55.7	84.21	0	66.2	10-168				12/7/2010 2107h
1012109-002BMS	Hexachloropropene	µg/L	EPA625	17.6	84.21	0	20.8	10-72				12/7/2010 2107h
1012109-002BMS	Indene	µg/L	EPA625	21.7	84.21	0	25.8	10-35				12/7/2010 2107h
1012109-002BMS	Indeno(1,2,3-cd)pyrene	µg/L	EPA625	73.1	84.21	0	86.8	10-176				12/7/2010 2107h

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(801) 263-8686, Toll Free (888) 263-8686, Fax (801) 263-8687
e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-002BMS	Isodrin	µg/L	EPA625	81.9	84.21	0	97.2	15-165				12/7/2010 2107h
1012109-002BMS	Isophorone	µg/L	EPA625	44.2	84.21	0	52.5	10-99				12/7/2010 2107h
1012109-002BMS	Isosafrole	µg/L	EPA625	41.6	84.21	0	49.4	10-167				12/7/2010 2107h
1012109-002BMS	Kepone	µg/L	EPA625	98.9	84.21	0	117	10-175				12/7/2010 2107h
1012109-002BMS	Methapyrilene	µg/L	EPA625	48.7	84.21	0	57.8	10-149				12/7/2010 2107h
1012109-002BMS	Methyl methanesulfonate	µg/L	EPA625	48.7	84.21	0	57.9	10-132				12/7/2010 2107h
1012109-002BMS	Naphthalene	µg/L	EPA625	31.9	84.21	0	37.8	10-82				12/7/2010 2107h
1012109-002BMS	n-Decane	µg/L	EPA625	10.7	84.21	0	12.7	10-27				12/7/2010 2107h
1012109-002BMS	Nitrobenzene	µg/L	EPA625	45.1	84.21	0	53.5	10-119				12/7/2010 2107h
1012109-002BMS	Nitroquinoline-1-oxide	µg/L	EPA625	41.5	84.21	0	49.3	10-170				12/7/2010 2107h
1012109-002BMS	N-Nitrosodiethylamine	µg/L	EPA625	32.8	84.21	0	39.0	10-91				12/7/2010 2107h
1012109-002BMS	N-Nitrosodimethylamine	µg/L	EPA625	13.0	84.21	0	15.4	10-42				12/7/2010 2107h
1012109-002BMS	N-Nitrosodi-n-butylamine	µg/L	EPA625	59.6	84.21	0	70.8	10-175				12/7/2010 2107h
1012109-002BMS	N-Nitrosodiphenylamine	µg/L	EPA625	75.4	84.21	0	89.6	12-112				12/7/2010 2107h
1012109-002BMS	N-Nitrosodi-n-propylamine	µg/L	EPA625	38.4	84.21	0	45.6	10-77				12/7/2010 2107h
1012109-002BMS	N-Nitrosomethylethylamine	µg/L	EPA625	26.9	84.21	0	31.9	10-75				12/7/2010 2107h
1012109-002BMS	N-Nitrosomorpholine	µg/L	EPA625	46.4	84.21	0	55.1	10-175				12/7/2010 2107h
1012109-002BMS	N-Nitrosopiperidine	µg/L	EPA625	46.3	84.21	0	55.0	10-105				12/7/2010 2107h
1012109-002BMS	N-Nitrosopyrrolidine	µg/L	EPA625	51.7	84.21	0	61.4	10-88				12/7/2010 2107h
1012109-002BMS	n-Octadecane	µg/L	EPA625	60.7	84.21	0	72.0	10-121				12/7/2010 2107h
1012109-002BMS	O,O,O-Triethyl phosphorothioate	µg/L	EPA625	44.1	84.21	0	52.4	10-93				12/7/2010 2107h
1012109-002BMS	o-Toluidine	µg/L	EPA625	39.5	84.21	0	47.0	10-107				12/7/2010 2107h
1012109-002BMS	Parathion	µg/L	EPA625	111	84.21	0	131	10-175				12/7/2010 2107h
1012109-002BMS	Methyl parathion	µg/L	EPA625	108	84.21	0	128	10-175				12/7/2010 2107h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
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QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-002BMS	Pentachlorobenzene	µg/L	EPA625	57.1	84.21	0	67.8	25-134				12/7/2010 2107h
1012109-002BMS	Pentachloronitrobenzene	µg/L	EPA625	83.6	84.21	0	99.3	10-175				12/7/2010 2107h
1012109-002BMS	Pentachlorophenol	µg/L	EPA625	31.9	84.21	0	37.8	10-163				12/7/2010 2107h
1012109-002BMS	Phenacetin	µg/L	EPA625	79.9	84.21	0	94.9	10-175				12/7/2010 2107h
1012109-002BMS	Phenanthrene	µg/L	EPA625	86.5	84.21	0	103	31-126				12/7/2010 2107h
1012109-002BMS	Phenol	µg/L	EPA625	25.7	84.21	0	30.5	10-175				12/7/2010 2107h
1012109-002BMS	Phorate	µg/L	EPA625	86.8	84.21	0	103	10-175				12/7/2010 2107h
1012109-002BMS	Pronamide	µg/L	EPA625	43.8	84.21	0	52.0	10-95				12/7/2010 2107h
1012109-002BMS	Pyrene	µg/L	EPA625	82.7	84.21	0	98.2	51-139				12/7/2010 2107h
1012109-002BMS	Pyridine	µg/L	EPA625	< 10.5	84.21	0	4.40	10-25			[1]~	12/7/2010 2107h
1012109-002BMS	Quinoline	µg/L	EPA625	52.8	84.21	0	62.8	10-63				12/7/2010 2107h
1012109-002BMS	Safrole	µg/L	EPA625	48.9	84.21	0	58.1	10-120				12/7/2010 2107h
1012109-002BMS	Tetraethyl dithiopyrophosphate	µg/L	EPA625	74.7	84.21	0	88.7	13-160				12/7/2010 2107h
1012109-002BMS	Thionazin	µg/L	EPA625	68.5	84.21	0	81.3	10-139				12/7/2010 2107h
1012109-002BMS	Surr: 2,4,6-Tribromophenol	%REC	EPA625	68.5	84.21		81.3	21-154				12/7/2010 2107h
1012109-002BMS	Surr: 2-Fluorobiphenyl	%REC	EPA625	22.2	42.11		52.8	10-106				12/7/2010 2107h
1012109-002BMS	Surr: 2-Fluorophenol	%REC	EPA625	25.3	84.21		30.0	10-56				12/7/2010 2107h
1012109-002BMS	Surr: Nitrobenzene-d5	%REC	EPA625	20.8	42.11		49.4	10-101				12/7/2010 2107h
1012109-002BMS	Surr: Phenol-d6	%REC	EPA625	19.2	84.21		22.8	10-45				12/7/2010 2107h
1012109-002BMS	Surr: Terphenyl-d14	%REC	EPA625	39.2	42.11		93.0	10-160				12/7/2010 2107h
1012109-002BMS	Acenaphthene	µg/L	SW8270D	58.0	84.21	0	68.9	21-113				12/7/2010 2107h
1012109-002BMS	Benzo(a)pyrene	µg/L	SW8270D	98.0	84.21	0	116	15-169				12/7/2010 2107h
1012109-002BMS	Pyrene	µg/L	SW8270D	82.7	84.21	0	98.2	23-150				12/7/2010 2107h
1012109-002BMS	Surr: 2,4,6-Tribromophenol	%REC	SW8270D	68.5	84.21		81.3	14-159				12/7/2010 2107h

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Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-002BMS	Surr: 2-Fluorobiphenyl	%REC	SW8270D	22.2	42.11		52.8	10-124				12/7/2010 2107h
1012109-002BMS	Surr: 2-Fluorophenol	%REC	SW8270D	25.3	84.21		30.0	10-106				12/7/2010 2107h
1012109-002BMS	Surr: Nitrobenzene-d5	%REC	SW8270D	20.8	42.11		49.4	10-180				12/7/2010 2107h
1012109-002BMS	Surr: Phenol-d6	%REC	SW8270D	19.2	84.21		22.8	10-122				12/7/2010 2107h
1012109-002BMS	Surr: Terphenyl-d14	%REC	SW8270D	39.2	42.11		93.0	10-199				12/7/2010 2107h

~ - LCS outliers are not target compounds for method 625 but are provided by AWAL as an additional service.
[1] - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
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QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-002BMSD	1,1´-Biphenyl	µg/L	EPA625	55.2	86.49	0	63.9	27-99	16.0	49		12/7/2010 2135h
1012109-002BMSD	1,2,4,5-Tetrachlorobenzene	µg/L	EPA625	46.3	86.49	0	53.5	10-119	18.9	52		12/7/2010 2135h
1012109-002BMSD	1,2,4-Trichlorobenzene	µg/L	EPA625	31.4	86.49	0	36.3	10-79	12.7	49		12/7/2010 2135h
1012109-002BMSD	1,2-Dichlorobenzene	µg/L	EPA625	22.4	86.49	0	25.9	10-59	13.0	46		12/7/2010 2135h
1012109-002BMSD	1,3,5-Trinitrobenzene	µg/L	EPA625	174	86.49	0	201	10-175	6.17	33	1	12/7/2010 2135h
1012109-002BMSD	1,3-Dichlorobenzene	µg/L	EPA625	18.9	86.49	0	21.8	10-56	13.7	49		12/7/2010 2135h
1012109-002BMSD	1,3-Dinitrobenzene	µg/L	EPA625	119	86.49	0	137	10-175	9.63	29		12/7/2010 2135h
1012109-002BMSD	1,4-Dichlorobenzene	µg/L	EPA625	20.0	86.49	0	23.1	10-58	12.7	51		12/7/2010 2135h
1012109-002BMSD	1,4-Naphthoquinone	µg/L	EPA625	49.8	86.49	0	57.6	10-177	14.2	99		12/7/2010 2135h
1012109-002BMSD	1,4-Phenylenediamine	µg/L	EPA625	41.3	86.49	0	47.8	10-124	17.8	48		12/7/2010 2135h
1012109-002BMSD	1-Chloronaphthalene	µg/L	EPA625	50.2	86.49	0	58.0	10-106	17.4	47		12/7/2010 2135h
1012109-002BMSD	1-Methylnaphthalene	µg/L	EPA625	24.7	86.49	0	28.5	10-83	16.9	44		12/7/2010 2135h
1012109-002BMSD	1-Naphthylamine	µg/L	EPA625	35.2	86.49	0	40.7	10-122	8.54	57		12/7/2010 2135h
1012109-002BMSD	2,3,4,6-Tetrachlorophenol	µg/L	EPA625	84.9	86.49	0	98.2	10-157	17.4	39		12/7/2010 2135h
1012109-002BMSD	2,4,5-Trichlorophenol	µg/L	EPA625	64.3	86.49	0	74.3	10-148	13.0	56		12/7/2010 2135h
1012109-002BMSD	2,4,6-Trichlorophenol	µg/L	EPA625	64.2	86.49	0	74.2	10-136	9.69	52		12/7/2010 2135h
1012109-002BMSD	2,4-Dichlorophenol	µg/L	EPA625	64.9	86.49	0	75.0	10-123	10.6	67		12/7/2010 2135h
1012109-002BMSD	2,4-Dimethylphenol	µg/L	EPA625	61.3	86.49	0	70.9	10-113	4.50	32		12/7/2010 2135h
1012109-002BMSD	2,4-Dinitrophenol	µg/L	EPA625	120	86.49	0	139	10-175	12.6	78		12/7/2010 2135h
1012109-002BMSD	2,4-Dinitrotoluene	µg/L	EPA625	114	86.49	0	132	10-175	9.35	26		12/7/2010 2135h
1012109-002BMSD	2,6-Dichlorophenol	µg/L	EPA625	69.7	86.49	0	80.6	10-148	8.53	56		12/7/2010 2135h
1012109-002BMSD	2,6-Dinitrotoluene	µg/L	EPA625	95.1	86.49	0	110	10-175	9.61	74		12/7/2010 2135h
1012109-002BMSD	2-Acetylaminofluorene	µg/L	EPA625	49.3	86.49	0	57.0	10-94	9.73	52		12/7/2010 2135h
1012109-002BMSD	2-Chloronaphthalene	µg/L	EPA625	48.7	86.49	0	56.4	10-93	16.1	49		12/7/2010 2135h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
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Contact: Jim Harris
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QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-002BMSD	2-Chlorophenol	µg/L	EPA625	54.3	86.49	0	62.7	10-92	11.6	58		12/7/2010 2135h
1012109-002BMSD	2-Methylnaphthalene	µg/L	EPA625	42.4	86.49	0	49.0	15-78	12.3	39		12/7/2010 2135h
1012109-002BMSD	2-Methylphenol	µg/L	EPA625	27.3	86.49	0	31.5	10-83	12.5	49		12/7/2010 2135h
1012109-002BMSD	2-Naphthylamine	µg/L	EPA625	37.0	86.49	0	42.8	10-154	9.18	37		12/7/2010 2135h
1012109-002BMSD	2-Nitroaniline	µg/L	EPA625	106	86.49	0	123	10-175	10.3	87		12/7/2010 2135h
1012109-002BMSD	2-Nitrophenol	µg/L	EPA625	79.3	86.49	0	91.6	10-175	10.3	64		12/7/2010 2135h
1012109-002BMSD	2-Picoline	µg/L	EPA625	12.5	86.49	0	14.4	10-61	21.5	63		12/7/2010 2135h
1012109-002BMSD	3&4-Methylphenol	µg/L	EPA625	56.7	86.49	0	65.6	10-80	14.6	99		12/7/2010 2135h
1012109-002BMSD	3,3´-Dichlorobenzidine	µg/L	EPA625	84.1	86.49	0	97.2	10-150	10.1	63		12/7/2010 2135h
1012109-002BMSD	3,3´-Dimethylbenzidine	µg/L	EPA625	48.7	86.49	0	56.3	10-143	6.37	99		12/7/2010 2135h
1012109-002BMSD	3-Methylcholanthrene	µg/L	EPA625	90.2	86.49	0	104	32-171	9.81	46		12/7/2010 2135h
1012109-002BMSD	3-Nitroaniline	µg/L	EPA625	90.0	86.49	0	104	10-175	9.95	29		12/7/2010 2135h
1012109-002BMSD	4,6-Dinitro-2-methylphenol	µg/L	EPA625	148	86.49	0	171	10-175	4.94	70		12/7/2010 2135h
1012109-002BMSD	4-Aminobiphenyl	µg/L	EPA625	85.3	86.49	0	98.6	10-175	8.28	79		12/7/2010 2135h
1012109-002BMSD	4-Bromophenyl phenyl ether	µg/L	EPA625	76.2	86.49	0	88.1	16-138	6.01	31		12/7/2010 2135h
1012109-002BMSD	4-Chloro-3-methylphenol	µg/L	EPA625	77.5	86.49	0	89.6	10-131	3.48	37		12/7/2010 2135h
1012109-002BMSD	4-Chloroaniline	µg/L	EPA625	55.2	86.49	0	63.8	10-98	16.0	41		12/7/2010 2135h
1012109-002BMSD	4-Chlorophenyl phenyl ether	µg/L	EPA625	69.7	86.49	0	80.6	31-108	9.41	30		12/7/2010 2135h
1012109-002BMSD	4-Nitroaniline	µg/L	EPA625	85.0	86.49	0	98.3	10-175	13.7	99		12/7/2010 2135h
1012109-002BMSD	4-Nitrophenol	µg/L	EPA625	31.3	86.49	0	36.2	10-97	10.5	69		12/7/2010 2135h
1012109-002BMSD	5-Nitro-o-toluidine	µg/L	EPA625	106	86.49	0	123	10-175	10.8	26		12/7/2010 2135h
1012109-002BMSD	7,12-Dimethylbenz(a)anthracene	µg/L	EPA625	47.1	86.49	0	54.5	26-174	7.22	40		12/7/2010 2135h
1012109-002BMSD	a,a-Dimethylphenethylamine	µg/L	EPA625	27.0	86.49	0	31.2	10-175	0.566	99		12/7/2010 2135h
1012109-002BMSD	Acenaphthene	µg/L	EPA625	65.0	86.49	0	75.2	29-97	11.4	38		12/7/2010 2135h

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Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-002BMSD	Acenaphthylene	µg/L	EPA625	64.6	86.49	0	74.7	37-87	12.4	37		12/7/2010 2135h
1012109-002BMSD	Acetophenone	µg/L	EPA625	48.5	86.49	0	56.1	10-96	19.2	48		12/7/2010 2135h
1012109-002BMSD	alpha-Terpineol	µg/L	EPA625	68.7	86.49	0	79.4	10-67	19.1	46	1	12/7/2010 2135h
1012109-002BMSD	Aniline	µg/L	EPA625	17.5	86.49	0	20.2	10-71	21.4	48		12/7/2010 2135h
1012109-002BMSD	Anthracene	µg/L	EPA625	89.5	86.49	0	104	53-114	7.17	26		12/7/2010 2135h
1012109-002BMSD	Aramite	µg/L	EPA625	61.6	86.49	0	71.3	29-160	6.00	30		12/7/2010 2135h
1012109-002BMSD	Azobenzene	µg/L	EPA625	67.0	86.49	0	77.5	15-114	8.71	36		12/7/2010 2135h
1012109-002BMSD	Benz(a)anthracene	µg/L	EPA625	82.9	86.49	0	95.9	39-129	10.2	32		12/7/2010 2135h
1012109-002BMSD	Benzidine	µg/L	EPA625	54.9	86.49	0	63.5	10-99	8.08	99		12/7/2010 2135h
1012109-002BMSD	Benzo(a)pyrene	µg/L	EPA625	108	86.49	0	125	29-175	9.54	45		12/7/2010 2135h
1012109-002BMSD	Benzo(b)fluoranthene	µg/L	EPA625	81.3	86.49	0	94.0	15-140	8.69	44		12/7/2010 2135h
1012109-002BMSD	Benzo(g,h,i)perylene	µg/L	EPA625	77.3	86.49	0	89.4	10-182	9.17	48		12/7/2010 2135h
1012109-002BMSD	Benzo(k)fluoranthene	µg/L	EPA625	115	86.49	0	133	21-154	9.05	52		12/7/2010 2135h
1012109-002BMSD	Benzoic acid	µg/L	EPA625	< 21.6	86.49	0	13.7	10-71	0	78		12/7/2010 2135h
1012109-002BMSD	Benzyl alcohol	µg/L	EPA625	24.6	86.49	0	28.4	10-69	27.5	52		12/7/2010 2135h
1012109-002BMSD	Bis(2-chloroethoxy)methane	µg/L	EPA625	47.5	86.49	0	55.0	10-94	19.8	45		12/7/2010 2135h
1012109-002BMSD	Bis(2-chloroethyl) ether	µg/L	EPA625	32.8	86.49	0	37.9	10-70	17.3	47		12/7/2010 2135h
1012109-002BMSD	Bis(2-chloroisopropyl) ether	µg/L	EPA625	32.7	86.49	0	37.9	10-71	14.8	49		12/7/2010 2135h
1012109-002BMSD	Bis(2-ethylhexyl) phthalate	µg/L	EPA625	89.5	86.49	0	103	10-175	8.38	28		12/7/2010 2135h
1012109-002BMSD	bis(2-ethylhexyl)adipate	µg/L	EPA625	92.2	86.49	0	107	10-175	9.04	25		12/7/2010 2135h
1012109-002BMSD	Butyl benzyl phthalate	µg/L	EPA625	87.3	86.49	0	101	10-175	6.46	99		12/7/2010 2135h
1012109-002BMSD	Carbazole	µg/L	EPA625	94.3	86.49	0	109	10-151	7.48	30		12/7/2010 2135h
1012109-002BMSD	Chlorobenzilate	µg/L	EPA625	80.7	86.49	0	93.3	18-175	7.99	25		12/7/2010 2135h
1012109-002BMSD	Chrysene	µg/L	EPA625	92.1	86.49	0	107	38-133	10.6	28		12/7/2010 2135h

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463 West 3600 South
Salt Lake City, UT 84115
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e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-002BMSD	Diallate (cis or trans)	µg/L	EPA625	73.8	86.49	0	85.4	10-157	7.40	29		12/7/2010 2135h
1012109-002BMSD	Dibenz(a,h)anthracene	µg/L	EPA625	80.4	86.49	0	92.9	13-168	7.51	51		12/7/2010 2135h
1012109-002BMSD	Dibenzofuran	µg/L	EPA625	66.3	86.49	0	76.6	29-103	11.0	34		12/7/2010 2135h
1012109-002BMSD	Diethyl phthalate	µg/L	EPA625	76.4	86.49	0	88.4	10-139	8.86	32		12/7/2010 2135h
1012109-002BMSD	Dimethoate	µg/L	EPA625	22.1	86.49	0	25.6	10-136	1.84	45		12/7/2010 2135h
1012109-002BMSD	Dimethyl phthalate	µg/L	EPA625	57.7	86.49	0	66.7	10-122	8.53	57		12/7/2010 2135h
1012109-002BMSD	Dimethylaminoazobenzene	µg/L	EPA625	84.6	86.49	0	97.9	34-142	10.5	26		12/7/2010 2135h
1012109-002BMSD	Di-n-butyl phthalate	µg/L	EPA625	< 10.8	86.49	0	0	44-124	0	25	1	12/7/2010 2135h
1012109-002BMSD	Di-n-octyl phthalate	µg/L	EPA625	113	86.49	0	131	10-175	8.56	50		12/7/2010 2135h
1012109-002BMSD	Dinoseb	µg/L	EPA625	158	86.49	0	183	10-175	8.17	42	1	12/7/2010 2135h
1012109-002BMSD	Diphenylamine	µg/L	EPA625	78.7	86.49	0	91.0	13-110	7.56	34		12/7/2010 2135h
1012109-002BMSD	Disulfoton	µg/L	EPA625	61.5	86.49	0	71.1	10-121	9.28	25		12/7/2010 2135h
1012109-002BMSD	Ethyl methanesulfonate	µg/L	EPA625	44.6	86.49	0	51.5	10-99	20.5	46		12/7/2010 2135h
1012109-002BMSD	Famphur	µg/L	EPA625	159	86.49	0	184	10-71	5.45	25	1	12/7/2010 2135h
1012109-002BMSD	Fluoranthene	µg/L	EPA625	92.8	86.49	0	107	23-135	7.12	25		12/7/2010 2135h
1012109-002BMSD	Fluorene	µg/L	EPA625	72.6	86.49	0	83.9	34-108	8.00	28		12/7/2010 2135h
1012109-002BMSD	Hexachlorobenzene	µg/L	EPA625	78.6	86.49	0	90.9	26-131	8.76	28		12/7/2010 2135h
1012109-002BMSD	Hexachlorobutadiene	µg/L	EPA625	24.9	86.49	0	28.8	10-110	15.3	68		12/7/2010 2135h
1012109-002BMSD	Hexachlorocyclopentadiene	µg/L	EPA625	16.3	86.49	0	18.9	10-45	28.9	79		12/7/2010 2135h
1012109-002BMSD	Hexachloroethane	µg/L	EPA625	20.3	86.49	0	23.5	10-58	20.5	42		12/7/2010 2135h
1012109-002BMSD	Hexachlorophene	µg/L	EPA625	56.3	86.49	0	65.1	10-168	0.991	25		12/7/2010 2135h
1012109-002BMSD	Hexachloropropene	µg/L	EPA625	21.4	86.49	0	24.8	10-72	19.8	63		12/7/2010 2135h
1012109-002BMSD	Indene	µg/L	EPA625	24.4	86.49	0	28.3	10-35	11.8	35		12/7/2010 2135h
1012109-002BMSD	Indeno(1,2,3-cd)pyrene	µg/L	EPA625	80.0	86.49	0	92.5	10-176	9.04	48		12/7/2010 2135h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-002BMSD	Isodrin	µg/L	EPA625	89.6	86.49	0	104	15-165	8.99	25		12/7/2010 2135h
1012109-002BMSD	Isophorone	µg/L	EPA625	52.7	86.49	0	60.9	10-99	17.4	41		12/7/2010 2135h
1012109-002BMSD	Isosafrole	µg/L	EPA625	50.7	86.49	0	58.7	10-167	19.8	50		12/7/2010 2135h
1012109-002BMSD	Kepone	µg/L	EPA625	109	86.49	0	126	10-175	9.97	46		12/7/2010 2135h
1012109-002BMSD	Methapyrilene	µg/L	EPA625	51.1	86.49	0	59.1	10-149	4.81	51		12/7/2010 2135h
1012109-002BMSD	Methyl methanesulfonate	µg/L	EPA625	55.8	86.49	0	64.6	10-132	13.6	45		12/7/2010 2135h
1012109-002BMSD	Naphthalene	µg/L	EPA625	37.1	86.49	0	42.9	10-82	15.1	43		12/7/2010 2135h
1012109-002BMSD	n-Decane	µg/L	EPA625	12.2	86.49	0	14.2	10-27	13.7	32		12/7/2010 2135h
1012109-002BMSD	Nitrobenzene	µg/L	EPA625	53.7	86.49	0	62.1	10-119	17.5	49		12/7/2010 2135h
1012109-002BMSD	Nitroquinoline-1-oxide	µg/L	EPA625	48.1	86.49	0	55.6	10-170	14.6	97		12/7/2010 2135h
1012109-002BMSD	N-Nitrosodiethylamine	µg/L	EPA625	39.7	86.49	0	45.9	10-91	19.0	54		12/7/2010 2135h
1012109-002BMSD	N-Nitrosodimethylamine	µg/L	EPA625	14.2	86.49	0	16.4	10-42	8.79	66		12/7/2010 2135h
1012109-002BMSD	N-Nitrosodi-n-butylamine	µg/L	EPA625	66.0	86.49	0	76.3	10-175	10.2	80		12/7/2010 2135h
1012109-002BMSD	N-Nitrosodiphenylamine	µg/L	EPA625	83.1	86.49	0	96.1	12-112	9.70	30		12/7/2010 2135h
1012109-002BMSD	N-Nitrosodi-n-propylamine	µg/L	EPA625	46.7	86.49	0	54.1	10-77	19.6	47		12/7/2010 2135h
1012109-002BMSD	N-Nitrosomethylethylamine	µg/L	EPA625	31.7	86.49	0	36.7	10-75	16.6	60		12/7/2010 2135h
1012109-002BMSD	N-Nitrosomorpholine	µg/L	EPA625	55.8	86.49	0	64.5	10-175	18.4	73		12/7/2010 2135h
1012109-002BMSD	N-Nitrosopiperidine	µg/L	EPA625	55.4	86.49	0	64.0	10-105	17.9	44		12/7/2010 2135h
1012109-002BMSD	N-Nitrosopyrrolidine	µg/L	EPA625	62.4	86.49	0	72.1	10-88	18.7	40		12/7/2010 2135h
1012109-002BMSD	n-Octadecane	µg/L	EPA625	66.7	86.49	0	77.2	10-121	9.55	40		12/7/2010 2135h
1012109-002BMSD	O,O,O-Triethyl phosphorothioate	µg/L	EPA625	52.4	86.49	0	60.6	10-93	17.2	44		12/7/2010 2135h
1012109-002BMSD	o-Toluidine	µg/L	EPA625	47.7	86.49	0	55.2	10-107	18.7	46		12/7/2010 2135h
1012109-002BMSD	Parathion	µg/L	EPA625	122	86.49	0	141	10-175	9.73	28		12/7/2010 2135h
1012109-002BMSD	Methyl parathion	µg/L	EPA625	114	86.49	0	131	10-175	5.11	26		12/7/2010 2135h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-002BMSD	Pentachlorobenzene	µg/L	EPA625	63.7	86.49	0	73.6	25-134	10.9	35		12/7/2010 2135h
1012109-002BMSD	Pentachloronitrobenzene	µg/L	EPA625	88.1	86.49	0	102	10-175	5.25	25		12/7/2010 2135h
1012109-002BMSD	Pentachlorophenol	µg/L	EPA625	39.9	86.49	0	46.2	10-163	22.5	58		12/7/2010 2135h
1012109-002BMSD	Phenacetin	µg/L	EPA625	85.7	86.49	0	99.1	10-175	6.96	38		12/7/2010 2135h
1012109-002BMSD	Phenanthrene	µg/L	EPA625	94.3	86.49	0	109	31-126	8.57	32		12/7/2010 2135h
1012109-002BMSD	Phenol	µg/L	EPA625	28.8	86.49	0	33.4	10-175	11.7	71		12/7/2010 2135h
1012109-002BMSD	Phorate	µg/L	EPA625	93.1	86.49	0	108	10-175	7.03	42		12/7/2010 2135h
1012109-002BMSD	Pronamide	µg/L	EPA625	46.7	86.49	0	54.0	10-95	6.27	26		12/7/2010 2135h
1012109-002BMSD	Pyrene	µg/L	EPA625	88.8	86.49	0	103	51-139	7.08	27		12/7/2010 2135h
1012109-002BMSD	Pyridine	µg/L	EPA625	< 10.8	86.49	0	4.48	10-25	0	61	1~	12/7/2010 2135h
1012109-002BMSD	Quinoline	µg/L	EPA625	60.9	86.49	0	70.4	10-63	14.2	99	1	12/7/2010 2135h
1012109-002BMSD	Safrole	µg/L	EPA625	56.6	86.49	0	65.5	10-120	14.6	51		12/7/2010 2135h
1012109-002BMSD	Tetraethyl dithiopyrophosphate	µg/L	EPA625	80.9	86.49	0	93.5	13-160	7.96	35		12/7/2010 2135h
1012109-002BMSD	Thionazin	µg/L	EPA625	73.0	86.49	0	84.4	10-139	6.35	25		12/7/2010 2135h
1012109-002BMSD	Surr: 2,4,6-Tribromophenol	%REC	EPA625	72.3	86.49		83.6	21-154				12/7/2010 2135h
1012109-002BMSD	Surr: 2-Fluorobiphenyl	%REC	EPA625	25.4	43.24		58.8	10-106				12/7/2010 2135h
1012109-002BMSD	Surr: 2-Fluorophenol	%REC	EPA625	29.2	86.49		33.8	10-56				12/7/2010 2135h
1012109-002BMSD	Surr: Nitrobenzene-d5	%REC	EPA625	23.5	43.24		54.4	10-101				12/7/2010 2135h
1012109-002BMSD	Surr: Phenol-d6	%REC	EPA625	21.2	86.49		24.5	10-45				12/7/2010 2135h
1012109-002BMSD	Surr: Terphenyl-d14	%REC	EPA625	42.4	43.24		98.0	10-160				12/7/2010 2135h
1012109-002BMSD	Acenaphthene	µg/L	SW8270D	65.0	86.49	0	75.2	21-113	11.4	25		12/7/2010 2135h
1012109-002BMSD	Benzo(a)pyrene	µg/L	SW8270D	108	86.49	0	125	15-169	9.54	25		12/7/2010 2135h
1012109-002BMSD	Pyrene	µg/L	SW8270D	88.8	86.49	0	103	23-150	7.08	25		12/7/2010 2135h
1012109-002BMSD	Surr: 2,4,6-Tribromophenol	%REC	SW8270D	72.3	86.49		83.6	14-159				12/7/2010 2135h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSSV
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-002BMSD	Surr: 2-Fluorobiphenyl	%REC	SW8270D	25.4	43.24		58.8	10-124				12/7/2010 2135h
1012109-002BMSD	Surr: 2-Fluorophenol	%REC	SW8270D	29.2	86.49		33.8	10-106				12/7/2010 2135h
1012109-002BMSD	Surr: Nitrobenzene-d5	%REC	SW8270D	23.5	43.24		54.4	10-180				12/7/2010 2135h
1012109-002BMSD	Surr: Phenol-d6	%REC	SW8270D	21.2	86.49		24.5	10-122				12/7/2010 2135h
1012109-002BMSD	Surr: Terphenyl-d14	%REC	SW8270D	42.4	43.24		98.0	10-199				12/7/2010 2135h

~ - LCS outliers are not target compounds for method 625 but are provided by AWAL as an additional service.
[1] - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSVOA
QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS VOC 120610B	1,1,1,2-Tetrachloroethane	µg/L	EPA624	17.6	20.00	0	87.9	74-117				12/6/2010 2144h
LCS VOC 120610B	1,1,1-Trichloroethane	µg/L	EPA624	17.9	20.00	0	89.4	49-140				12/6/2010 2144h
LCS VOC 120610B	1,1,2,2-Tetrachloroethane	µg/L	EPA624	15.0	20.00	0	75.0	67-119				12/6/2010 2144h
LCS VOC 120610B	1,1,2-Trichloro-1,2,2-trifluoroetha	µg/L	EPA624	19.4	20.00	0	97.2	21-206				12/6/2010 2144h
LCS VOC 120610B	1,1,2-Trichloroethane	µg/L	EPA624	17.3	20.00	0	86.5	80-123				12/6/2010 2144h
LCS VOC 120610B	1,1-Dichloropropene	µg/L	EPA624	38.0	40.00	0	95.0	10-140				12/6/2010 2144h
LCS VOC 120610B	1,1-Dichloroethane	µg/L	EPA624	17.8	20.00	0	89.0	70-130				12/6/2010 2144h
LCS VOC 120610B	1,1-Dichloroethene	µg/L	EPA624	21.5	20.00	0	107	52-171				12/6/2010 2144h
LCS VOC 120610B	1,2,3-Trichlorobenzene	µg/L	EPA624	16.7	20.00	0	83.4	67-131				12/6/2010 2144h
LCS VOC 120610B	1,2,3-Trichloropropane	µg/L	EPA624	16.6	20.00	0	83.1	62-116				12/6/2010 2144h
LCS VOC 120610B	1,2,3-Trimethylbenzene	µg/L	EPA624	17.7	20.00	0	88.6	76-140				12/6/2010 2144h
LCS VOC 120610B	1,2,4-Trichlorobenzene	µg/L	EPA624	15.9	20.00	0	79.6	58-133				12/6/2010 2144h
LCS VOC 120610B	1,2,4-Trimethylbenzene	µg/L	EPA624	16.5	20.00	0	82.6	79-151				12/6/2010 2144h
LCS VOC 120610B	1,2-Dibromo-3-chloropropane	µg/L	EPA624	15.0	20.00	0	75.0	64-129				12/6/2010 2144h
LCS VOC 120610B	1,2-Dibromoethane	µg/L	EPA624	17.4	20.00	0	87.2	70-126				12/6/2010 2144h
LCS VOC 120610B	1,2-Dichlorobenzene	µg/L	EPA624	17.3	20.00	0	86.6	67-135				12/6/2010 2144h
LCS VOC 120610B	1,2-Dichloroethane	µg/L	EPA624	17.3	20.00	0	86.6	60-137				12/6/2010 2144h
LCS VOC 120610B	1,2-Dichloropropane	µg/L	EPA624	17.5	20.00	0	87.4	59-135				12/6/2010 2144h
LCS VOC 120610B	1,3,5-Trimethylbenzene	µg/L	EPA624	16.8	20.00	0	84.0	77-151				12/6/2010 2144h
LCS VOC 120610B	1,3-Dichlorobenzene	µg/L	EPA624	17.0	20.00	0	84.8	78-134				12/6/2010 2144h
LCS VOC 120610B	1,3-Dichloropropane	µg/L	EPA624	17.4	20.00	0	87.1	78-116				12/6/2010 2144h
LCS VOC 120610B	1,4-Dichlorobenzene	µg/L	EPA624	16.6	20.00	0	83.3	72-139				12/6/2010 2144h
LCS VOC 120610B	1,4-Dioxane	µg/L	EPA624	178	200.0	0	89.0	33-149				12/6/2010 2144h
LCS VOC 120610B	2,2-Dichloropropane	µg/L	EPA624	15.9	30.00	0	52.9	13-180				12/6/2010 2144h

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QC SUMMARY REPORT

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Contact: Jim Harris
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Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS VOC 120610B	2-Butanone	µg/L	EPA624	22.9	20.00	0	114	10-217				12/6/2010 2144h
LCS VOC 120610B	2-Chloroethyl vinyl ether	µg/L	EPA624	37.7	40.00	0	94.3	32-163				12/6/2010 2144h
LCS VOC 120610B	2-Chlorotoluene	µg/L	EPA624	16.7	20.00	0	83.3	79-142				12/6/2010 2144h
LCS VOC 120610B	2-Hexanone	µg/L	EPA624	16.2	20.00	0	81.1	50-156				12/6/2010 2144h
LCS VOC 120610B	2-Nitropropane	µg/L	EPA624	15.7	20.00	0	78.6	10-243				12/6/2010 2144h
LCS VOC 120610B	4-Chlorotoluene	µg/L	EPA624	16.9	20.00	0	84.7	68-128				12/6/2010 2144h
LCS VOC 120610B	4-Isopropyltoluene	µg/L	EPA624	15.8	20.00	0	79.2	73-156				12/6/2010 2144h
LCS VOC 120610B	4-Methyl-2-pentanone	µg/L	EPA624	15.8	20.00	0	78.9	10-214				12/6/2010 2144h
LCS VOC 120610B	Acetone	µg/L	EPA624	14.7	20.00	0	73.4	10-313				12/6/2010 2144h
LCS VOC 120610B	Acetonitrile	µg/L	EPA624	35.8	40.00	0	89.4	37-159				12/6/2010 2144h
LCS VOC 120610B	Acrolein	µg/L	EPA624	61.3	40.00	0	153	10-325				12/6/2010 2144h
LCS VOC 120610B	Acrylonitrile	µg/L	EPA624	15.8	20.00	0	79.2	53-134				12/6/2010 2144h
LCS VOC 120610B	Allyl chloride	µg/L	EPA624	16.5	20.00	0	82.4	10-243				12/6/2010 2144h
LCS VOC 120610B	Benzene	µg/L	EPA624	19.3	20.00	0	96.7	62-127				12/6/2010 2144h
LCS VOC 120610B	Benzyl chloride	µg/L	EPA624	14.3	20.00	0	71.5	40-146				12/6/2010 2144h
LCS VOC 120610B	Bis(2-chloroisopropyl) ether	µg/L	EPA624	16.3	20.00	0	81.4	54-146				12/6/2010 2144h
LCS VOC 120610B	Bromobenzene	µg/L	EPA624	16.1	20.00	0	80.4	78-148				12/6/2010 2144h
LCS VOC 120610B	Bromochloromethane	µg/L	EPA624	18.9	20.00	0	94.4	75-134				12/6/2010 2144h
LCS VOC 120610B	Bromodichloromethane	µg/L	EPA624	17.1	20.00	0	85.3	74-121				12/6/2010 2144h
LCS VOC 120610B	Bromoform	µg/L	EPA624	16.4	20.00	0	81.9	68-131				12/6/2010 2144h
LCS VOC 120610B	Bromomethane	µg/L	EPA624	14.4	20.00	0	71.8	10-185				12/6/2010 2144h
LCS VOC 120610B	Butyl acetate	µg/L	EPA624	17.7	20.00	0	88.4	46-178				12/6/2010 2144h
LCS VOC 120610B	Carbon disulfide	µg/L	EPA624	24.1	20.00	0	121	21-224				12/6/2010 2144h
LCS VOC 120610B	Carbon tetrachloride	µg/L	EPA624	18.3	20.00	0	91.4	60-157				12/6/2010 2144h

AMERICAN WEST ANALYTICAL LABORATORIES
463 West 3600 South
Salt Lake City, UT 84115
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e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSVOA
QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS VOC 120610B	Chlorobenzene	µg/L	EPA624	17.8	20.00	0	89.0	63-140				12/6/2010 2144h
LCS VOC 120610B	Chloroethane	µg/L	EPA624	17.7	20.00	0	88.4	41-173				12/6/2010 2144h
LCS VOC 120610B	Chloroform	µg/L	EPA624	17.2	20.00	0	86.2	67-132				12/6/2010 2144h
LCS VOC 120610B	Chloromethane	µg/L	EPA624	14.1	20.00	0	70.4	10-138				12/6/2010 2144h
LCS VOC 120610B	Chloroprene	µg/L	EPA624	17.0	20.00	0	85.2	10-161				12/6/2010 2144h
LCS VOC 120610B	cis-1,2-Dichloroethene	µg/L	EPA624	18.4	20.00	0	92.2	72-137				12/6/2010 2144h
LCS VOC 120610B	cis-1,3-Dichloropropene	µg/L	EPA624	17.8	40.00	0	44.6	10-134				12/6/2010 2144h
LCS VOC 120610B	Cyclohexane	µg/L	EPA624	20.9	20.00	0	104	35-230				12/6/2010 2144h
LCS VOC 120610B	Cyclohexanone	µg/L	EPA624	< 50.0	40.00	0	52.5	10-374				12/6/2010 2144h
LCS VOC 120610B	Dibromochloromethane	µg/L	EPA624	17.2	20.00	0	85.9	68-135				12/6/2010 2144h
LCS VOC 120610B	Dibromomethane	µg/L	EPA624	17.2	20.00	0	85.9	74-120				12/6/2010 2144h
LCS VOC 120610B	Dichlorodifluoromethane	µg/L	EPA624	10.8	20.00	0	54.0	10-150				12/6/2010 2144h
LCS VOC 120610B	Ethyl acetate	µg/L	EPA624	36.3	40.00	0	90.7	50-155				12/6/2010 2144h
LCS VOC 120610B	Ethyl ether	µg/L	EPA624	20.1	20.00	0	101	45-146				12/6/2010 2144h
LCS VOC 120610B	Ethyl methacrylate	µg/L	EPA624	17.0	20.00	0	85.2	64-113				12/6/2010 2144h
LCS VOC 120610B	Ethylbenzene	µg/L	EPA624	17.9	20.00	0	89.7	55-133				12/6/2010 2144h
LCS VOC 120610B	Hexachlorobutadiene	µg/L	EPA624	15.0	20.00	0	74.8	35-213				12/6/2010 2144h
LCS VOC 120610B	Iodomethane	µg/L	EPA624	18.7	20.00	0	93.6	10-233				12/6/2010 2144h
LCS VOC 120610B	Isobutyl alcohol	µg/L	EPA624	< 100	80.00	0	86.3	12-202				12/6/2010 2144h
LCS VOC 120610B	Isopropyl acetate	µg/L	EPA624	17.6	20.00	0	87.8	55-145				12/6/2010 2144h
LCS VOC 120610B	Isopropyl alcohol	µg/L	EPA624	45.6	80.00	0	57.0	12-250				12/6/2010 2144h
LCS VOC 120610B	Isopropylbenzene	µg/L	EPA624	17.3	20.00	0	86.7	60-147				12/6/2010 2144h
LCS VOC 120610B	Isopropyltoluene	µg/L	EPA624	15.8	20.00	0	79.2	73-156				12/6/2010 2144h
LCS VOC 120610B	m,p-Xylene	µg/L	EPA624	36.8	40.00	0	92.1	70-130				12/6/2010 2144h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSVOA
QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS VOC 120610B	Methacrylonitrile	µg/L	EPA624	16.8	20.00	0	84.2	79-123				12/6/2010 2144h
LCS VOC 120610B	Methyl Acetate	µg/L	EPA624	34.6	20.00	0	173	5-398				12/6/2010 2144h
LCS VOC 120610B	Methyl methacrylate	µg/L	EPA624	16.2	20.00	0	80.8	55-128				12/6/2010 2144h
LCS VOC 120610B	Methyl tert-butyl ether	µg/L	EPA624	18.1	20.00	0	90.4	37-189				12/6/2010 2144h
LCS VOC 120610B	Methylcyclohexane	µg/L	EPA624	19.6	20.00	0	98.1	65-175				12/6/2010 2144h
LCS VOC 120610B	Methylene chloride	µg/L	EPA624	12.6	20.00	0	63.1	55-138				12/6/2010 2144h
LCS VOC 120610B	n-Amyl acetate	µg/L	EPA624	11.7	20.00	0	58.6	10-187				12/6/2010 2144h
LCS VOC 120610B	Naphthalene	µg/L	EPA624	16.6	20.00	0	83.2	41-131				12/6/2010 2144h
LCS VOC 120610B	n-Butyl alcohol	µg/L	EPA624	66.1	80.00	0	82.6	10-226				12/6/2010 2144h
LCS VOC 120610B	n-Butylbenzene	µg/L	EPA624	15.6	20.00	0	77.8	40-158				12/6/2010 2144h
LCS VOC 120610B	n-Hexane	µg/L	EPA624	21.3	20.00	0	106	10-277				12/6/2010 2144h
LCS VOC 120610B	n-Octane	µg/L	EPA624	13.8	20.00	0	69.0	45-158				12/6/2010 2144h
LCS VOC 120610B	n-Propylbenzene	µg/L	EPA624	16.7	20.00	0	83.3	67-131				12/6/2010 2144h
LCS VOC 120610B	o-Xylene	µg/L	EPA624	17.8	20.00	0	89.0	70-130				12/6/2010 2144h
LCS VOC 120610B	Pentachloroethane	µg/L	EPA624	9.56	20.00	0	47.8	10-314				12/6/2010 2144h
LCS VOC 120610B	Propionitrile	µg/L	EPA624	< 25.0	20.00	0	83.0	60-132				12/6/2010 2144h
LCS VOC 120610B	Propyl acetate	µg/L	EPA624	17.2	20.00	0	86.0	48-143				12/6/2010 2144h
LCS VOC 120610B	sec-Butylbenzene	µg/L	EPA624	16.5	20.00	0	82.4	72-157				12/6/2010 2144h
LCS VOC 120610B	Styrene	µg/L	EPA624	17.6	20.00	0	87.9	81-125				12/6/2010 2144h
LCS VOC 120610B	tert-Butyl alcohol	µg/L	EPA624	32.2	40.00	0	80.4	50-286				12/6/2010 2144h
LCS VOC 120610B	tert-Butylbenzene	µg/L	EPA624	15.9	20.00	0	79.6	75-157				12/6/2010 2144h
LCS VOC 120610B	Tetrachloroethene	µg/L	EPA624	24.4	20.00	0	122	49-163				12/6/2010 2144h
LCS VOC 120610B	Tetrahydrofuran	µg/L	EPA624	14.7	20.00	0	73.6	43-146				12/6/2010 2144h
LCS VOC 120610B	Toluene	µg/L	EPA624	18.7	20.00	0	93.4	67-128				12/6/2010 2144h

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QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS VOC 120610B	trans-1,2-Dichloroethene	µg/L	EPA624	21.0	20.00	0	105	47-146				12/6/2010 2144h
LCS VOC 120610B	trans-1,3-Dichloropropene	µg/L	EPA624	17.5	20.00	0	87.5	29-143				12/6/2010 2144h
LCS VOC 120610B	trans-1,4-Dichloro-2-butene	µg/L	EPA624	17.4	20.00	0	87.2	20-214				12/6/2010 2144h
LCS VOC 120610B	Trichloroethene	µg/L	EPA624	19.4	20.00	0	97.0	54-152				12/6/2010 2144h
LCS VOC 120610B	Trichlorofluoromethane	µg/L	EPA624	15.3	20.00	0	76.5	56-166				12/6/2010 2144h
LCS VOC 120610B	Vinyl acetate	µg/L	EPA624	25.0	40.00	0	62.6	38-121				12/6/2010 2144h
LCS VOC 120610B	Vinyl chloride	µg/L	EPA624	16.1	20.00	0	80.3	13-155				12/6/2010 2144h
LCS VOC 120610B	Xylenes, Total	µg/L	EPA624	54.6	60.00	0	91.0	52-130				12/6/2010 2144h
LCS VOC 120610B	Surr: 1,2-Dichloroethane-d4	%REC	EPA624	47.5	50.00		95.0	69-132				12/6/2010 2144h
LCS VOC 120610B	Surr: 4-Bromofluorobenzene	%REC	EPA624	49.5	50.00		99.0	85-118				12/6/2010 2144h
LCS VOC 120610B	Surr: Dibromofluoromethane	%REC	EPA624	48.8	50.00		97.7	80-120				12/6/2010 2144h
LCS VOC 120610B	Surr: Toluene-d8	%REC	EPA624	49.8	50.00		99.6	81-120				12/6/2010 2144h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSVOA
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB VOC 120610B	1,1,1,2-Tetrachloroethane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,1,1-Trichloroethane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,1,2,2-Tetrachloroethane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,1,2-Trichloro-1,2,2-trifluoroetha	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,1,2-Trichloroethane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,1-Dichloropropene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,1-Dichloroethane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,1-Dichloroethene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,2,3-Trichlorobenzene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,2,3-Trichloropropane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,2,3-Trimethylbenzene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,2,4-Trichlorobenzene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,2,4-Trimethylbenzene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,2-Dibromo-3-chloropropane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,2-Dibromoethane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,2-Dichlorobenzene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,2-Dichloroethane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,2-Dichloropropane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,3,5-Trimethylbenzene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,3-Dichlorobenzene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,3-Dichloropropane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,4-Dichlorobenzene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	1,4-Dioxane	µg/L	EPA624	< 40.0				-				12/6/2010 2222h
MB VOC 120610B	2,2-Dichloropropane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h

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QC SUMMARY REPORT

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Project: Red Butte Spill

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QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB VOC 120610B	2-Butanone	µg/L	EPA624	< 10.0				-				12/6/2010 2222h
MB VOC 120610B	2-Chloroethyl vinyl ether	µg/L	EPA624	< 5.00				-				12/6/2010 2222h
MB VOC 120610B	2-Chlorotoluene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	2-Hexanone	µg/L	EPA624	< 5.00				-				12/6/2010 2222h
MB VOC 120610B	2-Nitropropane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	4-Chlorotoluene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	4-Isopropyltoluene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	4-Methyl-2-pentanone	µg/L	EPA624	< 5.00				-				12/6/2010 2222h
MB VOC 120610B	Acetone	µg/L	EPA624	< 10.0				-				12/6/2010 2222h
MB VOC 120610B	Acetonitrile	µg/L	EPA624	< 5.00				-				12/6/2010 2222h
MB VOC 120610B	Acrolein	µg/L	EPA624	< 5.00				-				12/6/2010 2222h
MB VOC 120610B	Acrylonitrile	µg/L	EPA624	< 10.0				-				12/6/2010 2222h
MB VOC 120610B	Allyl chloride	µg/L	EPA624	< 5.00				-				12/6/2010 2222h
MB VOC 120610B	Benzene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Benzyl chloride	µg/L	EPA624	< 5.00				-				12/6/2010 2222h
MB VOC 120610B	Bis(2-chloroisopropyl) ether	µg/L	EPA624	< 5.00				-				12/6/2010 2222h
MB VOC 120610B	Bromobenzene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Bromochloromethane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Bromodichloromethane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Bromoform	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Bromomethane	µg/L	EPA624	< 5.00				-				12/6/2010 2222h
MB VOC 120610B	Butyl acetate	µg/L	EPA624	< 5.00				-				12/6/2010 2222h
MB VOC 120610B	Carbon disulfide	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Carbon tetrachloride	µg/L	EPA624	< 2.00				-				12/6/2010 2222h

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Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB VOC 120610B	Chlorobenzene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Chloroethane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Chloroform	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Chloromethane	µg/L	EPA624	< 5.00				-				12/6/2010 2222h
MB VOC 120610B	Chloroprene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	cis-1,2-Dichloroethene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	cis-1,3-Dichloropropene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Cyclohexane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Cyclohexanone	µg/L	EPA624	< 50.0				-				12/6/2010 2222h
MB VOC 120610B	Dibromochloromethane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Dibromomethane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Dichlorodifluoromethane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Ethyl acetate	µg/L	EPA624	< 10.0				-				12/6/2010 2222h
MB VOC 120610B	Ethyl ether	µg/L	EPA624	< 10.0				-				12/6/2010 2222h
MB VOC 120610B	Ethyl methacrylate	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Ethylbenzene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Hexachlorobutadiene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Iodomethane	µg/L	EPA624	< 5.00				-				12/6/2010 2222h
MB VOC 120610B	Isobutyl alcohol	µg/L	EPA624	< 100				-				12/6/2010 2222h
MB VOC 120610B	Isopropyl acetate	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Isopropyl alcohol	µg/L	EPA624	< 25.0				-				12/6/2010 2222h
MB VOC 120610B	Isopropylbenzene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Isopropyltoluene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	m,p-Xylene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h

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Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB VOC 120610B	Methacrylonitrile	µg/L	EPA624	< 5.00				-				12/6/2010 2222h
MB VOC 120610B	Methyl Acetate	µg/L	EPA624	< 5.00				-				12/6/2010 2222h
MB VOC 120610B	Methyl methacrylate	µg/L	EPA624	< 5.00				-				12/6/2010 2222h
MB VOC 120610B	Methyl tert-butyl ether	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Methylcyclohexane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Methylene chloride	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	n-Amyl acetate	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Naphthalene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	n-Butyl alcohol	µg/L	EPA624	< 25.0				-				12/6/2010 2222h
MB VOC 120610B	n-Butylbenzene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	n-Hexane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	n-Octane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	n-Propylbenzene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	o-Xylene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Pentachloroethane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Propionitrile	µg/L	EPA624	< 25.0				-				12/6/2010 2222h
MB VOC 120610B	Propyl acetate	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	sec-Butylbenzene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Styrene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	tert-Butyl alcohol	µg/L	EPA624	< 20.0				-				12/6/2010 2222h
MB VOC 120610B	tert-Butylbenzene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Tetrachloroethene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Tetrahydrofuran	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Toluene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h

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463 West 3600 South
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e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSVOA
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB VOC 120610B	TPH C11-C15 (DRO)	µg/L	EPA624	< 20.0				-				12/6/2010 2222h
MB VOC 120610B	TPH C6-C10 (GRO)	µg/L	EPA624	< 20.0				-				12/6/2010 2222h
MB VOC 120610B	trans-1,2-Dichloroethene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	trans-1,3-Dichloropropene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	trans-1,4-Dichloro-2-butene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Trichloroethene	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Trichlorofluoromethane	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Vinyl acetate	µg/L	EPA624	< 5.00				-				12/6/2010 2222h
MB VOC 120610B	Vinyl chloride	µg/L	EPA624	< 1.00				-				12/6/2010 2222h
MB VOC 120610B	Xylenes, Total	µg/L	EPA624	< 2.00				-				12/6/2010 2222h
MB VOC 120610B	Surr: 1,2-Dichloroethane-d4	%REC	EPA624	49.1	50.00		98.1	69-132				12/6/2010 2222h
MB VOC 120610B	Surr: 4-Bromofluorobenzene	%REC	EPA624	52.6	50.00		105	85-118				12/6/2010 2222h
MB VOC 120610B	Surr: Dibromofluoromethane	%REC	EPA624	48.4	50.00		96.9	80-120				12/6/2010 2222h
MB VOC 120610B	Surr: Toluene-d8	%REC	EPA624	49.7	50.00		99.3	81-120				12/6/2010 2222h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSVOA
QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-001AMS	1,1,1,2-Tetrachloroethane	µg/L	EPA624	18.3	20.00	0	91.5	74-117				12/7/2010 0058h
1012109-001AMS	1,1,1-Trichloroethane	µg/L	EPA624	21.8	20.00	0	109	67-147				12/7/2010 0058h
1012109-001AMS	1,1,2,2-Tetrachloroethane	µg/L	EPA624	14.9	20.00	0	74.5	67-119				12/7/2010 0058h
1012109-001AMS	1,1,2-Trichloro-1,2,2-trifluoroetha	µg/L	EPA624	24.9	20.00	0	125	21-206				12/7/2010 0058h
1012109-001AMS	1,1,2-Trichloroethane	µg/L	EPA624	17.0	20.00	0	85.1	80-123				12/7/2010 0058h
1012109-001AMS	1,1-Dichloropropene	µg/L	EPA624	43.6	40.00	0	109	10-140				12/7/2010 0058h
1012109-001AMS	1,1-Dichloroethane	µg/L	EPA624	19.8	20.00	0	99.2	70-130				12/7/2010 0058h
1012109-001AMS	1,1-Dichloroethene	µg/L	EPA624	26.0	20.00	0	130	62-152				12/7/2010 0058h
1012109-001AMS	1,2,3-Trichlorobenzene	µg/L	EPA624	15.6	20.00	0	78.0	67-131				12/7/2010 0058h
1012109-001AMS	1,2,3-Trichloropropane	µg/L	EPA624	17.4	20.00	0	87.0	62-116				12/7/2010 0058h
1012109-001AMS	1,2,3-Trimethylbenzene	µg/L	EPA624	18.1	20.00	0	90.4	76-140				12/7/2010 0058h
1012109-001AMS	1,2,4-Trichlorobenzene	µg/L	EPA624	15.2	20.00	0	76.1	58-133				12/7/2010 0058h
1012109-001AMS	1,2,4-Trimethylbenzene	µg/L	EPA624	17.7	20.00	0	88.3	79-151				12/7/2010 0058h
1012109-001AMS	1,2-Dibromo-3-chloropropane	µg/L	EPA624	15.4	20.00	0	76.9	64-129				12/7/2010 0058h
1012109-001AMS	1,2-Dibromoethane	µg/L	EPA624	17.2	20.00	0	86.0	70-126				12/7/2010 0058h
1012109-001AMS	1,2-Dichlorobenzene	µg/L	EPA624	17.8	20.00	0	89.0	70-130				12/7/2010 0058h
1012109-001AMS	1,2-Dichloroethane	µg/L	EPA624	19.8	20.00	0	99.0	39-162				12/7/2010 0058h
1012109-001AMS	1,2-Dichloropropane	µg/L	EPA624	17.6	20.00	0	88.0	59-135				12/7/2010 0058h
1012109-001AMS	1,3,5-Trimethylbenzene	µg/L	EPA624	18.0	20.00	0	90.3	77-151				12/7/2010 0058h
1012109-001AMS	1,3-Dichlorobenzene	µg/L	EPA624	17.5	20.00	0	87.6	78-134				12/7/2010 0058h
1012109-001AMS	1,3-Dichloropropane	µg/L	EPA624	16.9	20.00	0	84.4	78-116				12/7/2010 0058h
1012109-001AMS	1,4-Dichlorobenzene	µg/L	EPA624	17.2	20.00	0	85.8	72-139				12/7/2010 0058h
1012109-001AMS	1,4-Dioxane	µg/L	EPA624	160	200.0	0	80.2	33-149				12/7/2010 0058h
1012109-001AMS	2,2-Dichloropropane	µg/L	EPA624	21.6	30.00	0	71.9	13-180				12/7/2010 0058h

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Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSVOA
QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-001AMS	2-Butanone	µg/L	EPA624	24.9	20.00	0	125	10-217				12/7/2010 0058h
1012109-001AMS	2-Chloroethyl vinyl ether	µg/L	EPA624	< 5.00	40.00	0	0	32-163			1	12/7/2010 0058h
1012109-001AMS	2-Chlorotoluene	µg/L	EPA624	17.8	20.00	0	88.8	79-142				12/7/2010 0058h
1012109-001AMS	2-Hexanone	µg/L	EPA624	14.8	20.00	0	74.2	50-156				12/7/2010 0058h
1012109-001AMS	2-Nitropropane	µg/L	EPA624	17.9	20.00	0	89.6	10-243				12/7/2010 0058h
1012109-001AMS	4-Chlorotoluene	µg/L	EPA624	17.5	20.00	0	87.6	68-128				12/7/2010 0058h
1012109-001AMS	4-Isopropyltoluene	µg/L	EPA624	17.2	20.00	0	86.2	73-156				12/7/2010 0058h
1012109-001AMS	4-Methyl-2-pentanone	µg/L	EPA624	15.4	20.00	0	77.1	10-214				12/7/2010 0058h
1012109-001AMS	Acetone	µg/L	EPA624	15.5	20.00	0	77.4	10-313				12/7/2010 0058h
1012109-001AMS	Acetonitrile	µg/L	EPA624	33.3	40.00	0	83.4	37-159				12/7/2010 0058h
1012109-001AMS	Acrolein	µg/L	EPA624	65.4	40.00	0	163	10-325				12/7/2010 0058h
1012109-001AMS	Acrylonitrile	µg/L	EPA624	16.1	20.00	0	80.4	53-134				12/7/2010 0058h
1012109-001AMS	Allyl chloride	µg/L	EPA624	19.2	20.00	0	95.9	10-243				12/7/2010 0058h
1012109-001AMS	Benzene	µg/L	EPA624	20.4	20.00	0	102	66-145				12/7/2010 0058h
1012109-001AMS	Benzyl chloride	µg/L	EPA624	16.6	20.00	0	82.9	40-146				12/7/2010 0058h
1012109-001AMS	Bis(2-chloroisopropyl) ether	µg/L	EPA624	15.2	20.00	0	76.1	54-146				12/7/2010 0058h
1012109-001AMS	Bromobenzene	µg/L	EPA624	16.4	20.00	0	81.9	78-148				12/7/2010 0058h
1012109-001AMS	Bromochloromethane	µg/L	EPA624	19.8	20.00	0	99.0	75-134				12/7/2010 0058h
1012109-001AMS	Bromodichloromethane	µg/L	EPA624	18.7	20.00	0	93.5	74-121				12/7/2010 0058h
1012109-001AMS	Bromoform	µg/L	EPA624	17.0	20.00	0	84.8	68-131				12/7/2010 0058h
1012109-001AMS	Bromomethane	µg/L	EPA624	14.9	20.00	0	74.4	10-185				12/7/2010 0058h
1012109-001AMS	Butyl acetate	µg/L	EPA624	16.0	20.00	0	79.8	46-178				12/7/2010 0058h
1012109-001AMS	Carbon disulfide	µg/L	EPA624	29.3	20.00	0	146	21-224				12/7/2010 0058h
1012109-001AMS	Carbon tetrachloride	µg/L	EPA624	23.6	20.00	0	118	60-157				12/7/2010 0058h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSVOA
QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-001AMS	Chlorobenzene	µg/L	EPA624	17.8	20.00	0	89.1	63-140				12/7/2010 0058h
1012109-001AMS	Chloroethane	µg/L	EPA624	18.6	20.00	0	93.3	41-173				12/7/2010 0058h
1012109-001AMS	Chloroform	µg/L	EPA624	19.5	20.00	0	97.6	50-146				12/7/2010 0058h
1012109-001AMS	Chloromethane	µg/L	EPA624	14.9	20.00	0	74.6	10-138				12/7/2010 0058h
1012109-001AMS	Chloroprene	µg/L	EPA624	19.6	20.00	0	97.9	10-161				12/7/2010 0058h
1012109-001AMS	cis-1,2-Dichloroethene	µg/L	EPA624	19.4	20.00	0	97.2	72-137				12/7/2010 0058h
1012109-001AMS	cis-1,3-Dichloropropene	µg/L	EPA624	18.6	40.00	0	46.4	10-134				12/7/2010 0058h
1012109-001AMS	Cyclohexane	µg/L	EPA624	24.0	20.00	0	120	35-230				12/7/2010 0058h
1012109-001AMS	Cyclohexanone	µg/L	EPA624	< 50.0	40.00	0	44.5	10-374				12/7/2010 0058h
1012109-001AMS	Dibromochloromethane	µg/L	EPA624	17.5	20.00	0	87.5	68-135				12/7/2010 0058h
1012109-001AMS	Dibromomethane	µg/L	EPA624	18.0	20.00	0	89.9	74-120				12/7/2010 0058h
1012109-001AMS	Dichlorodifluoromethane	µg/L	EPA624	13.6	20.00	0	67.8	10-150				12/7/2010 0058h
1012109-001AMS	Ethyl acetate	µg/L	EPA624	35.7	40.00	0	89.2	50-155				12/7/2010 0058h
1012109-001AMS	Ethyl ether	µg/L	EPA624	20.5	20.00	0	102	45-146				12/7/2010 0058h
1012109-001AMS	Ethyl methacrylate	µg/L	EPA624	15.4	20.00	0	77.2	77-151				12/7/2010 0058h
1012109-001AMS	Ethylbenzene	µg/L	EPA624	18.6	20.00	0	93.2	69-133				12/7/2010 0058h
1012109-001AMS	Hexachlorobutadiene	µg/L	EPA624	16.8	20.00	0	83.9	35-213				12/7/2010 0058h
1012109-001AMS	Iodomethane	µg/L	EPA624	20.9	20.00	0	104	10-233				12/7/2010 0058h
1012109-001AMS	Isobutyl alcohol	µg/L	EPA624	< 100	80.00	0	87.8	12-202				12/7/2010 0058h
1012109-001AMS	Isopropyl acetate	µg/L	EPA624	17.4	20.00	0	86.8	55-145				12/7/2010 0058h
1012109-001AMS	Isopropyl alcohol	µg/L	EPA624	63.0	80.00	0	78.7	12-250				12/7/2010 0058h
1012109-001AMS	Isopropylbenzene	µg/L	EPA624	18.7	20.00	0	93.6	60-147				12/7/2010 0058h
1012109-001AMS	Isopropyltoluene	µg/L	EPA624	17.2	20.00	0	86.2	73-156				12/7/2010 0058h
1012109-001AMS	m,p-Xylene	µg/L	EPA624	37.9	40.00	0	94.8	70-130				12/7/2010 0058h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSVOA
QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-001AMS	Methacrylonitrile	µg/L	EPA624	16.2	20.00	0	81.2	79-123				12/7/2010 0058h
1012109-001AMS	Methyl Acetate	µg/L	EPA624	24.7	20.00	0	123	5-398				12/7/2010 0058h
1012109-001AMS	Methyl methacrylate	µg/L	EPA624	15.3	20.00	0	76.6	55-128				12/7/2010 0058h
1012109-001AMS	Methyl tert-butyl ether	µg/L	EPA624	17.4	20.00	0	86.9	37-189				12/7/2010 0058h
1012109-001AMS	Methylcyclohexane	µg/L	EPA624	23.2	20.00	0	116	65-175				12/7/2010 0058h
1012109-001AMS	Methylene chloride	µg/L	EPA624	14.2	20.00	0	70.8	55-138				12/7/2010 0058h
1012109-001AMS	n-Amyl acetate	µg/L	EPA624	10.7	20.00	0	53.4	10-187				12/7/2010 0058h
1012109-001AMS	Naphthalene	µg/L	EPA624	15.3	20.00	0	76.5	41-131				12/7/2010 0058h
1012109-001AMS	n-Butyl alcohol	µg/L	EPA624	58.3	80.00	0	72.9	10-226				12/7/2010 0058h
1012109-001AMS	n-Butylbenzene	µg/L	EPA624	17.1	20.00	0	85.7	40-158				12/7/2010 0058h
1012109-001AMS	n-Hexane	µg/L	EPA624	17.9	20.00	0	89.5	10-277				12/7/2010 0058h
1012109-001AMS	n-Octane	µg/L	EPA624	16.0	20.00	0	79.8	45-158				12/7/2010 0058h
1012109-001AMS	n-Propylbenzene	µg/L	EPA624	17.9	20.00	0	89.7	67-131				12/7/2010 0058h
1012109-001AMS	o-Xylene	µg/L	EPA624	18.1	20.00	0	90.4	70-130				12/7/2010 0058h
1012109-001AMS	Pentachloroethane	µg/L	EPA624	10.1	20.00	0	50.7	10-314				12/7/2010 0058h
1012109-001AMS	Propionitrile	µg/L	EPA624	< 25.0	20.00	0	74.0	60-132				12/7/2010 0058h
1012109-001AMS	Propyl acetate	µg/L	EPA624	16.7	20.00	0	83.4	48-143				12/7/2010 0058h
1012109-001AMS	sec-Butylbenzene	µg/L	EPA624	18.2	20.00	0	91.1	72-157				12/7/2010 0058h
1012109-001AMS	Styrene	µg/L	EPA624	17.6	20.00	0	88.2	81-125				12/7/2010 0058h
1012109-001AMS	tert-Butyl alcohol	µg/L	EPA624	33.6	40.00	0	84.0	50-286				12/7/2010 0058h
1012109-001AMS	tert-Butylbenzene	µg/L	EPA624	17.5	20.00	0	87.5	75-157				12/7/2010 0058h
1012109-001AMS	Tetrachloroethene	µg/L	EPA624	25.6	20.00	0	128	49-163				12/7/2010 0058h
1012109-001AMS	Tetrahydrofuran	µg/L	EPA624	14.5	20.00	0	72.5	43-146				12/7/2010 0058h
1012109-001AMS	Toluene	µg/L	EPA624	18.7	20.00	0	93.6	18-192				12/7/2010 0058h

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QC SUMMARY REPORT

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Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-001AMS	trans-1,2-Dichloroethene	µg/L	EPA624	20.1	20.00	0	100	47-146				12/7/2010 0058h
1012109-001AMS	trans-1,3-Dichloropropene	µg/L	EPA624	18.8	20.00	0	94.3	29-143				12/7/2010 0058h
1012109-001AMS	trans-1,4-Dichloro-2-butene	µg/L	EPA624	19.0	20.00	0	94.9	20-214				12/7/2010 0058h
1012109-001AMS	Trichloroethene	µg/L	EPA624	21.6	20.00	0	108	61-153				12/7/2010 0058h
1012109-001AMS	Trichlorofluoromethane	µg/L	EPA624	20.1	20.00	0	101	56-166				12/7/2010 0058h
1012109-001AMS	Vinyl acetate	µg/L	EPA624	21.9	40.00	0	54.6	38-121				12/7/2010 0058h
1012109-001AMS	Vinyl chloride	µg/L	EPA624	18.0	20.00	0	89.9	13-155				12/7/2010 0058h
1012109-001AMS	Xylenes, Total	µg/L	EPA624	56.0	60.00	0	93.3	42-167				12/7/2010 0058h
1012109-001AMS	Surr: 1,2-Dichloroethane-d4	%REC	EPA624	54.4	50.00		109	77-144				12/7/2010 0058h
1012109-001AMS	Surr: 4-Bromofluorobenzene	%REC	EPA624	49.3	50.00		98.6	80-123				12/7/2010 0058h
1012109-001AMS	Surr: Dibromofluoromethane	%REC	EPA624	52.8	50.00		106	80-124				12/7/2010 0058h
1012109-001AMS	Surr: Toluene-d8	%REC	EPA624	47.6	50.00		95.1	80-125				12/7/2010 0058h

[1] - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

AMERICAN WEST ANALYTICAL LABORATORIES
463 West 3600 South
Salt Lake City, UT 84115
(801) 263-8686, Toll Free (888) 263-8686, Fax (801) 263-8687
e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSVOA
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-001AMSD	1,1,1,2-Tetrachloroethane	µg/L	EPA624	16.9	20.00	0	84.6	74-117	7.78	25		12/7/2010 0135h
1012109-001AMSD	1,1,1-Trichloroethane	µg/L	EPA624	20.3	20.00	0	102	67-147	7.22	25		12/7/2010 0135h
1012109-001AMSD	1,1,2,2-Tetrachloroethane	µg/L	EPA624	14.5	20.00	0	72.6	67-119	2.58	25		12/7/2010 0135h
1012109-001AMSD	1,1,2-Trichloro-1,2,2-trifluoroetha	µg/L	EPA624	23.2	20.00	0	116	21-206	6.94	25		12/7/2010 0135h
1012109-001AMSD	1,1,2-Trichloroethane	µg/L	EPA624	16.1	20.00	0	80.4	80-123	5.74	25		12/7/2010 0135h
1012109-001AMSD	1,1-Dichloropropene	µg/L	EPA624	41.3	40.00	0	103	10-140	5.37	25		12/7/2010 0135h
1012109-001AMSD	1,1-Dichloroethane	µg/L	EPA624	18.3	20.00	0	91.7	70-130	7.91	25		12/7/2010 0135h
1012109-001AMSD	1,1-Dichloroethene	µg/L	EPA624	23.9	20.00	0	119	62-152	8.54	25		12/7/2010 0135h
1012109-001AMSD	1,2,3-Trichlorobenzene	µg/L	EPA624	14.9	20.00	0	74.7	67-131	4.45	25		12/7/2010 0135h
1012109-001AMSD	1,2,3-Trichloropropane	µg/L	EPA624	16.1	20.00	0	80.4	62-116	7.95	25		12/7/2010 0135h
1012109-001AMSD	1,2,3-Trimethylbenzene	µg/L	EPA624	17.9	20.00	0	89.4	76-140	1.11	25		12/7/2010 0135h
1012109-001AMSD	1,2,4-Trichlorobenzene	µg/L	EPA624	14.3	20.00	0	71.7	58-133	5.89	25		12/7/2010 0135h
1012109-001AMSD	1,2,4-Trimethylbenzene	µg/L	EPA624	16.6	20.00	0	83.0	79-151	6.13	25		12/7/2010 0135h
1012109-001AMSD	1,2-Dibromo-3-chloropropane	µg/L	EPA624	15.4	20.00	0	76.9	64-129	0	25		12/7/2010 0135h
1012109-001AMSD	1,2-Dibromoethane	µg/L	EPA624	16.4	20.00	0	81.8	70-126	5.01	25		12/7/2010 0135h
1012109-001AMSD	1,2-Dichlorobenzene	µg/L	EPA624	16.9	20.00	0	84.4	70-130	5.19	25		12/7/2010 0135h
1012109-001AMSD	1,2-Dichloroethane	µg/L	EPA624	18.7	20.00	0	93.5	39-162	5.77	25		12/7/2010 0135h
1012109-001AMSD	1,2-Dichloropropane	µg/L	EPA624	16.6	20.00	0	83.3	59-135	5.49	25		12/7/2010 0135h
1012109-001AMSD	1,3,5-Trimethylbenzene	µg/L	EPA624	16.8	20.00	0	84.0	77-151	7.17	25		12/7/2010 0135h
1012109-001AMSD	1,3-Dichlorobenzene	µg/L	EPA624	16.4	20.00	0	82.2	78-134	6.42	25		12/7/2010 0135h
1012109-001AMSD	1,3-Dichloropropane	µg/L	EPA624	15.9	20.00	0	79.4	78-116	6.11	25		12/7/2010 0135h
1012109-001AMSD	1,4-Dichlorobenzene	µg/L	EPA624	16.2	20.00	0	80.9	72-139	5.88	25		12/7/2010 0135h
1012109-001AMSD	1,4-Dioxane	µg/L	EPA624	166	200.0	0	83.2	33-149	3.68	25		12/7/2010 0135h
1012109-001AMSD	2,2-Dichloropropane	µg/L	EPA624	19.9	30.00	0	66.2	13-180	8.25	25		12/7/2010 0135h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSVOA
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-001AMSD	2-Butanone	µg/L	EPA624	24.6	20.00	0	123	10-217	1.33	25		12/7/2010 0135h
1012109-001AMSD	2-Chloroethyl vinyl ether	µg/L	EPA624	< 5.00	40.00	0	0	32-163	0	25	1	12/7/2010 0135h
1012109-001AMSD	2-Chlorotoluene	µg/L	EPA624	16.9	20.00	0	84.7	79-142	4.78	25		12/7/2010 0135h
1012109-001AMSD	2-Hexanone	µg/L	EPA624	15.8	20.00	0	79.0	50-156	6.33	25		12/7/2010 0135h
1012109-001AMSD	2-Nitropropane	µg/L	EPA624	18.8	20.00	0	94.0	10-243	4.74	25		12/7/2010 0135h
1012109-001AMSD	4-Chlorotoluene	µg/L	EPA624	16.5	20.00	0	82.7	68-128	5.70	25		12/7/2010 0135h
1012109-001AMSD	4-Isopropyltoluene	µg/L	EPA624	16.1	20.00	0	80.6	73-156	6.66	25		12/7/2010 0135h
1012109-001AMSD	4-Methyl-2-pentanone	µg/L	EPA624	16.8	20.00	0	84.0	10-214	8.57	25		12/7/2010 0135h
1012109-001AMSD	Acetone	µg/L	EPA624	16.2	20.00	0	80.9	10-313	4.30	25		12/7/2010 0135h
1012109-001AMSD	Acetonitrile	µg/L	EPA624	32.9	40.00	0	82.2	37-159	1.39	25		12/7/2010 0135h
1012109-001AMSD	Acrolein	µg/L	EPA624	63.8	40.00	0	160	10-325	2.40	25		12/7/2010 0135h
1012109-001AMSD	Acrylonitrile	µg/L	EPA624	16.3	20.00	0	81.3	53-134	1.18	25		12/7/2010 0135h
1012109-001AMSD	Allyl chloride	µg/L	EPA624	20.4	20.00	0	102	10-243	6.21	25		12/7/2010 0135h
1012109-001AMSD	Benzene	µg/L	EPA624	19.0	20.00	0	95.2	66-145	7.04	25		12/7/2010 0135h
1012109-001AMSD	Benzyl chloride	µg/L	EPA624	16.6	20.00	0	83.0	40-146	0.181	25		12/7/2010 0135h
1012109-001AMSD	Bis(2-chloroisopropyl) ether	µg/L	EPA624	16.4	20.00	0	82.0	54-146	7.46	25		12/7/2010 0135h
1012109-001AMSD	Bromobenzene	µg/L	EPA624	15.7	20.00	0	78.4	78-148	4.37	25		12/7/2010 0135h
1012109-001AMSD	Bromochloromethane	µg/L	EPA624	18.4	20.00	0	92.0	75-134	7.33	25		12/7/2010 0135h
1012109-001AMSD	Bromodichloromethane	µg/L	EPA624	17.5	20.00	0	87.6	74-121	6.46	25		12/7/2010 0135h
1012109-001AMSD	Bromoform	µg/L	EPA624	16.2	20.00	0	81.2	68-131	4.40	25		12/7/2010 0135h
1012109-001AMSD	Bromomethane	µg/L	EPA624	16.5	20.00	0	82.4	10-185	10.3	25		12/7/2010 0135h
1012109-001AMSD	Butyl acetate	µg/L	EPA624	16.0	20.00	0	80.0	46-178	0.250	25		12/7/2010 0135h
1012109-001AMSD	Carbon disulfide	µg/L	EPA624	29.8	20.00	0	149	21-224	1.63	25		12/7/2010 0135h
1012109-001AMSD	Carbon tetrachloride	µg/L	EPA624	21.4	20.00	0	107	60-157	9.70	25		12/7/2010 0135h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSVOA
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-001AMSD	Chlorobenzene	µg/L	EPA624	16.8	20.00	0	84.2	63-140	5.65	25		12/7/2010 0135h
1012109-001AMSD	Chloroethane	µg/L	EPA624	18.6	20.00	0	93.0	41-173	0.322	25		12/7/2010 0135h
1012109-001AMSD	Chloroform	µg/L	EPA624	18.3	20.00	0	91.4	50-146	6.51	25		12/7/2010 0135h
1012109-001AMSD	Chloromethane	µg/L	EPA624	14.9	20.00	0	74.6	10-138	0.0670	25		12/7/2010 0135h
1012109-001AMSD	Chloroprene	µg/L	EPA624	18.6	20.00	0	93.0	10-161	5.03	25		12/7/2010 0135h
1012109-001AMSD	cis-1,2-Dichloroethene	µg/L	EPA624	18.1	20.00	0	90.5	72-137	7.09	25		12/7/2010 0135h
1012109-001AMSD	cis-1,3-Dichloropropene	µg/L	EPA624	17.3	40.00	0	43.2	10-134	7.09	25		12/7/2010 0135h
1012109-001AMSD	Cyclohexane	µg/L	EPA624	22.8	20.00	0	114	35-230	5.38	25		12/7/2010 0135h
1012109-001AMSD	Cyclohexanone	µg/L	EPA624	< 50.0	40.00	0	44.7	10-374	0	25		12/7/2010 0135h
1012109-001AMSD	Dibromochloromethane	µg/L	EPA624	16.8	20.00	0	84.0	68-135	4.08	25		12/7/2010 0135h
1012109-001AMSD	Dibromomethane	µg/L	EPA624	17.0	20.00	0	85.1	74-120	5.49	25		12/7/2010 0135h
1012109-001AMSD	Dichlorodifluoromethane	µg/L	EPA624	13.1	20.00	0	65.6	10-150	3.37	25		12/7/2010 0135h
1012109-001AMSD	Ethyl acetate	µg/L	EPA624	35.9	40.00	0	89.7	50-155	0.559	25		12/7/2010 0135h
1012109-001AMSD	Ethyl ether	µg/L	EPA624	20.8	20.00	0	104	45-146	1.55	25		12/7/2010 0135h
1012109-001AMSD	Ethyl methacrylate	µg/L	EPA624	16.4	20.00	0	82.0	77-151	5.90	25		12/7/2010 0135h
1012109-001AMSD	Ethylbenzene	µg/L	EPA624	17.3	20.00	0	86.5	69-133	7.46	25		12/7/2010 0135h
1012109-001AMSD	Hexachlorobutadiene	µg/L	EPA624	15.7	20.00	0	78.7	35-213	6.40	25		12/7/2010 0135h
1012109-001AMSD	Iodomethane	µg/L	EPA624	22.6	20.00	0	113	10-233	8.08	25		12/7/2010 0135h
1012109-001AMSD	Isobutyl alcohol	µg/L	EPA624	< 100	80.00	0	94.9	12-202	0	25		12/7/2010 0135h
1012109-001AMSD	Isopropyl acetate	µg/L	EPA624	17.4	20.00	0	86.8	55-145	0.0576	25		12/7/2010 0135h
1012109-001AMSD	Isopropyl alcohol	µg/L	EPA624	64.1	80.00	0	80.1	12-250	1.75	25		12/7/2010 0135h
1012109-001AMSD	Isopropylbenzene	µg/L	EPA624	17.4	20.00	0	87.1	60-147	7.14	25		12/7/2010 0135h
1012109-001AMSD	Isopropyltoluene	µg/L	EPA624	16.1	20.00	0	80.6	73-156	6.66	25		12/7/2010 0135h
1012109-001AMSD	m,p-Xylene	µg/L	EPA624	35.3	40.00	0	88.2	70-130	7.19	25		12/7/2010 0135h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSVOA
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-001AMSD	Methacrylonitrile	µg/L	EPA624	16.8	20.00	0	84.2	79-123	3.69	25		12/7/2010 0135h
1012109-001AMSD	Methyl Acetate	µg/L	EPA624	33.4	20.00	0	167	5-398	30.1	25	@	12/7/2010 0135h
1012109-001AMSD	Methyl methacrylate	µg/L	EPA624	16.4	20.00	0	82.0	55-128	6.81	25		12/7/2010 0135h
1012109-001AMSD	Methyl tert-butyl ether	µg/L	EPA624	18.9	20.00	0	94.4	37-189	8.33	25		12/7/2010 0135h
1012109-001AMSD	Methylcyclohexane	µg/L	EPA624	22.0	20.00	0	110	65-175	5.39	25		12/7/2010 0135h
1012109-001AMSD	Methylene chloride	µg/L	EPA624	13.5	20.00	0	67.7	55-138	4.48	25		12/7/2010 0135h
1012109-001AMSD	n-Amyl acetate	µg/L	EPA624	10.6	20.00	0	53.0	10-187	0.753	25		12/7/2010 0135h
1012109-001AMSD	Naphthalene	µg/L	EPA624	14.7	20.00	0	73.5	41-131	3.93	25		12/7/2010 0135h
1012109-001AMSD	n-Butyl alcohol	µg/L	EPA624	63.5	80.00	0	79.3	10-226	8.48	25		12/7/2010 0135h
1012109-001AMSD	n-Butylbenzene	µg/L	EPA624	15.6	20.00	0	78.2	40-158	9.09	25		12/7/2010 0135h
1012109-001AMSD	n-Hexane	µg/L	EPA624	23.7	20.00	0	119	10-277	28.0	25	@	12/7/2010 0135h
1012109-001AMSD	n-Octane	µg/L	EPA624	14.7	20.00	0	73.4	45-158	8.42	25		12/7/2010 0135h
1012109-001AMSD	n-Propylbenzene	µg/L	EPA624	16.6	20.00	0	83.1	67-131	7.58	25		12/7/2010 0135h
1012109-001AMSD	o-Xylene	µg/L	EPA624	16.9	20.00	0	84.4	70-130	6.87	25		12/7/2010 0135h
1012109-001AMSD	Pentachloroethane	µg/L	EPA624	10.9	20.00	0	54.6	10-314	7.51	25		12/7/2010 0135h
1012109-001AMSD	Propionitrile	µg/L	EPA624	< 25.0	20.00	0	84.0	60-132	0	25		12/7/2010 0135h
1012109-001AMSD	Propyl acetate	µg/L	EPA624	16.6	20.00	0	83.3	48-143	0.240	25		12/7/2010 0135h
1012109-001AMSD	sec-Butylbenzene	µg/L	EPA624	17.0	20.00	0	85.2	72-157	6.69	25		12/7/2010 0135h
1012109-001AMSD	Styrene	µg/L	EPA624	16.3	20.00	0	81.6	81-125	7.89	25		12/7/2010 0135h
1012109-001AMSD	tert-Butyl alcohol	µg/L	EPA624	35.2	40.00	0	88.0	50-286	4.65	25		12/7/2010 0135h
1012109-001AMSD	tert-Butylbenzene	µg/L	EPA624	16.5	20.00	0	82.6	75-157	5.70	25		12/7/2010 0135h
1012109-001AMSD	Tetrachloroethene	µg/L	EPA624	23.9	20.00	0	120	49-163	6.74	25		12/7/2010 0135h
1012109-001AMSD	Tetrahydrofuran	µg/L	EPA624	15.3	20.00	0	76.5	43-146	5.30	25		12/7/2010 0135h
1012109-001AMSD	Toluene	µg/L	EPA624	17.2	20.00	0	86.1	18-192	8.35	25		12/7/2010 0135h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: MSVOA
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-001AMSD	trans-1,2-Dichloroethene	µg/L	EPA624	18.8	20.00	0	93.8	47-146	6.70	25		12/7/2010 0135h
1012109-001AMSD	trans-1,3-Dichloropropene	µg/L	EPA624	17.8	20.00	0	89.0	29-143	5.79	25		12/7/2010 0135h
1012109-001AMSD	trans-1,4-Dichloro-2-butene	µg/L	EPA624	17.3	20.00	0	86.4	20-214	9.43	25		12/7/2010 0135h
1012109-001AMSD	Trichloroethene	µg/L	EPA624	20.2	20.00	0	101	61-153	6.94	25		12/7/2010 0135h
1012109-001AMSD	Trichlorofluoromethane	µg/L	EPA624	19.2	20.00	0	95.8	56-166	4.84	25		12/7/2010 0135h
1012109-001AMSD	Vinyl acetate	µg/L	EPA624	22.4	40.00	0	56.0	38-121	2.53	25		12/7/2010 0135h
1012109-001AMSD	Vinyl chloride	µg/L	EPA624	17.8	20.00	0	89.0	13-155	1.01	25		12/7/2010 0135h
1012109-001AMSD	Xylenes, Total	µg/L	EPA624	52.2	60.00	0	86.9	42-167	7.08	25		12/7/2010 0135h
1012109-001AMSD	Surr: 1,2-Dichloroethane-d4	%REC	EPA624	54.0	50.00		108	77-144				12/7/2010 0135h
1012109-001AMSD	Surr: 4-Bromofluorobenzene	%REC	EPA624	50.2	50.00		100	80-123				12/7/2010 0135h
1012109-001AMSD	Surr: Dibromofluoromethane	%REC	EPA624	52.1	50.00		104	80-124				12/7/2010 0135h
1012109-001AMSD	Surr: Toluene-d8	%REC	EPA624	47.1	50.00		94.3	80-125				12/7/2010 0135h

@ - High RPD due to suspected sample non-homogeneity or matrix interference.

[1] - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: WC
QC Type: DUP

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-002EDUP	Total Recoverable Petroleum Hydr	mg/L	E1664A-SG	< 3.00		2.050		-	0	20		12/7/2010 1217h

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QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: WC
QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS1-R21234	Chemical Oxygen Demand	mg/L	HACH 8000	111	100.0	0	111	85-115				12/7/2010 0930h
LCS2-R21234	Chemical Oxygen Demand	mg/L	HACH 8000	1,020	1,000	0	102	85-115				12/7/2010 0930h
LCS3-R21234	Chemical Oxygen Demand	mg/L	HACH 8000	10.0	10.00	0	100	85-115				12/7/2010 0930h
LCS-R21234	Chemical Oxygen Demand	mg/L	HACH 8000	290	300.0	0	96.7	85-115				12/7/2010 0930h
LCS-R21245	Total Recoverable Petroleum Hydr	mg/L	E1664A-SG	18.2	20.00	2.200	80.0	64-132				12/7/2010 1217h

AMERICAN WEST ANALYTICAL LABORATORIES
463 West 3600 South
Salt Lake City, UT 84115
(801) 263-8686, Toll Free (888) 263-8686, Fax (801) 263-8687
e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: WC
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-R21234	Chemical Oxygen Demand	mg/L	HACH 8000	< 10.0				-				12/7/2010 0930h
MB-R21245	Total Recoverable Petroleum Hydr	mg/L	E1664A-SG	< 3.00				-				12/7/2010 1217h

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Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: WC
QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-002FMS	Chemical Oxygen Demand	mg/L	HACH 8000	58.0	50.00	8.000	100	85-115				12/7/2010 0930h

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Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: WC
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1012109-002FMSD	Chemical Oxygen Demand	mg/L	HACH 8000	62.0	50.00	8.000	108	85-115	6.67	10		12/7/2010 0930h

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e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: WC
QC Type: QCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
QCS-R21245	Total Recoverable Petroleum Hydr	mg/L	E1664A-SG	18.9	20.00	2.200	83.5	64-132				12/7/2010 1217h

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Salt Lake City, UT 84115
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e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah DEQ DERR
Lab Set ID: 1012109
Project: Red Butte Spill

Contact: Jim Harris
Dept: WC
QC Type: QCSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
QCSD-R21245	Total Recoverable Petroleum Hydr	mg/L	E1664A-SG	19.4	20.00	2.200	86.0	64-132	2.61	34		12/7/2010 1217h

Library Search Compound Report

Data Path : M:\SVOAB\Raw Instrument Data 5973-B\DECEMBER10\06DECEMBER10\
Data File : F20 1012109-001B.D
Acq On : 7 Dec 2010 8:11 pm
Operator : ROBERT A MILLAR
Sample : 1012109-001B
Misc : SAMP
ALS Vial : 49 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_11-22-10.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 1 2,6,7-Triphenylfuro[2,3-E]i... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.95	7.19 ug/l	209396	ISTD-Perylene-d12	13.71

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2,6,7-Triphenylfuro[2,3-E]imidaz...	388	C25H16N4O	214475-32-8	38
2	2,3-Bis(indol-3-yl)-4-methyl-1,5...	388	C26H20N4	105283-36-1	9
3	3,6,7-Triphenylfuro[3,2-E]imidaz...	388	C25H16N4O	1000284-71-4	9
4	3,6-Pyridazinediacetonitrile, .a...	388	C24H16N6	134882-07-8	9
5	Methanone, (5-iodo-6-methoxy-2-n...	388	C18H13IO2	055281-96-4	4

QUANT-ORIGI...2_11-22-10.M Wed Dec 08 06:43:52 2010

Library Search Compound Report

Data Path : M:\SVOAB\Raw Instrument Data 5973-B\DECEMBER10\06DECEMBER10\
Data File : F24 1012109-003B.D
Acq On : 7 Dec 2010 10:03 pm
Operator : ROBERT A MILLAR
Sample : 1012109-003B
Misc : SAMP
ALS Vial : 53 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_11-22-10.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 1 Thiophene, tetraphenyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.95	10.95 ug/l	312049	ISTD-Perylene-d12	13.71

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Thiophene, tetraphenyl-	388	C28H20S	001884-68-0	46
2	3,6-Pyridazinediacetonitrile, .a...	388	C24H16N6	134882-07-8	38
3	6H-Benzo[a]naphtho[1',2':5,6]pyr...	388	C28H20O2	005724-46-9	37
4	Dinaphtho[1,2-d:1',2'-d']benzo[1...	388	C26H12O4	003604-49-7	32
5	Cholestan-3-ol, (3.alpha.)-	388	C27H48O	018769-46-5	25

QUANT-ORIGI...2_11-22-10.M Wed Dec 08 06:48:40 2010

American West Analytical Laboratories

RUSH

WORK ORDER Summary

Work Order: 1012109

Client: Utah DEQ DERR

Client ID: UTD100 **Contact:** Jim Harris 12/6/2010

Project: Red Butte Spill **QC Level:** LEVEL II+ **WO Type:** Standard

Comments: No Hard Copies. QC 2+ / Next Day Rush / Report out TIC's for Semi's -(Use #2 as MS/MSD) / client was notified that ORO would take longer, he said to send partial reports and do the best we can;

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1012109-001A	RB AB Gardens 4992095	12/6/2010 3:15:00 PM	12/6/2010 5:32:00 PM	12/8/2010	Aqueous	624-W	☑	voc	3
1012109-001B				12/8/2010		3510-SVOA-PR	☐	walkin semi	
				12/8/2010		625-W	☑	walkin semi	
				12/8/2010		8270-W	☑	walkin semi	
1012109-001C				12/8/2010		3510-TPH-PR	☐	Hall-TPH (liters)	2
				12/8/2010		8015-W-TPH(1L)	☑	Hall-TPH (liters)	
1012109-001D				12/8/2010		3510-ORO-PR	☐	Hall-ORO (liters)	
				12/8/2010		8015-W-ORO(1L)	☐	Hall-ORO (liters)	
1012109-001E				12/8/2010		OGF-W-1664SGT	☐	OGFFridge	1
1012109-001F				12/8/2010		COD-HACH8000	☐	ww - cod	
1012109-002A	RB NR Greenhouse 4992088	12/6/2010 3:45:00 PM		12/8/2010		624-W	☑	voc	3
1012109-002B				12/8/2010		3510-SVOA-PR	☐	walkin semi	
				12/8/2010		625-W	☑	walkin semi	
				12/8/2010		8270-W	☑	walkin semi	
1012109-002C				12/8/2010		3510-TPH-PR	☐	Hall-TPH (liters)	
				12/8/2010		8015-W-TPH(1L)	☑	Hall-TPH (liters)	
1012109-002D				12/8/2010		3510-ORO-PR	☐	Hall-ORO (liters)	2
				12/8/2010		8015-W-ORO(1L)	☐	Hall-ORO (liters)	
1012109-002E				12/8/2010		OGF-W-1664SGT	☐	OGFFridge	
1012109-002F				12/8/2010		COD-HACH8000	☐	ww - cod	1
1012109-003A	RB @ Foothill 4992086	12/6/2010 4:15:00 PM		12/8/2010		624-W	☑	voc	3
1012109-003B				12/8/2010		3510-SVOA-PR	☐	walkin semi	
				12/8/2010		625-W	☑	walkin semi	
				12/8/2010		8270-W	☑	walkin semi	

WORK ORDER Summary

Work Order: **1012109**

Client: Utah DEQ DERR

Client ID: UTD100 **Contact:** Jim Harris 12/6/2010

Project: Red Butte Spill **QC Level:** LEVEL II+ **WO Type:** Standard

Comments: No Hard Copies. QC 2+ / Next Day Rush / Report out TIC's for Semi's -(Use #2 as MS/MSD) / client was notified that ORO would take longer, he said to send partial reports and do the best we can;

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1012109-003C	RB @ Foothill 4992086	12/6/2010 4:15:00 PM	12/6/2010 5:32:00 PM	12/8/2010	Aqueous	3510-TPH-PR	☐	Hall-TPH (liters)	2
				12/8/2010		8015-W-TPH(1L)	☑	Hall-TPH (liters)	
1012109-003D				12/8/2010		3510-ORO-PR	☐	Hall-ORO (liters)	
				12/8/2010		8015-W-ORO(1L)	☐	Hall-ORO (liters)	
1012109-003E				12/8/2010		OGF-W-1664SGT	☐	OGFFridge	1
1012109-003F				12/8/2010		COD-HACH8000	☐	ww - cod	
1012109-004A	RB @ Miller Pk 4992084	12/6/2010 4:40:00 PM		12/8/2010		624-W	☑	voc	3
1012109-004B				12/8/2010		3510-SVOA-PR	☐	walkin semi	
				12/8/2010		625-W	☑	walkin semi	
				12/8/2010		8270-W	☑	walkin semi	
1012109-004C				12/8/2010		3510-TPH-PR	☐	Hall-TPH (liters)	2
				12/8/2010		8015-W-TPH(1L)	☑	Hall-TPH (liters)	
1012109-004D				12/8/2010		3510-ORO-PR	☐	Hall-ORO (liters)	
				12/8/2010		8015-W-ORO(1L)	☐	Hall-ORO (liters)	
1012109-004E				12/8/2010		OGF-W-1664SGT	☐	OGFFridge	1
1012109-004F				12/8/2010		COD-HACH8000	☐	ww - cod	
1012109-005A	RB @ 1100 E. 4992083	12/6/2010 5:00:00 PM		12/8/2010		624-W	☑	voc	3
1012109-005B				12/8/2010		3510-SVOA-PR	☐	walkin semi	
				12/8/2010		625-W	☑	walkin semi	
				12/8/2010		8270-W	☑	walkin semi	
1012109-005C				12/8/2010		3510-TPH-PR	☐	Hall-TPH (liters)	2
				12/8/2010		8015-W-TPH(1L)	☑	Hall-TPH (liters)	
1012109-005D				12/8/2010		3510-ORO-PR	☐	Hall-ORO (liters)	

WORK ORDER Summary

Work Order: **1012109**

Client: Utah DEQ DERR

Client ID: UTD100 **Contact:** Jim Harris 12/6/2010

Project: Red Butte Spill **QC Level:** LEVEL II+ **WO Type:** Standard

Comments: No Hard Copies. QC 2+ / Next Day Rush / Report out TIC's for Semi's -(Use #2 as MS/MSD) / client was notified that ORO would take longer, he said to send partial reports and do the best we can;

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1012109-005D	RB @ 1100 E. 4992083	12/6/2010 5:00:00 PM	12/6/2010 5:32:00 PM	12/8/2010	Aqueous	8015-W-ORO(1L)	☐	Hall-ORO (liters)	2
1012109-005E				12/8/2010		OGF-W-1664SGT	☐	OGFFridge	1
1012109-005F				12/8/2010		COD-HACH8000	☐	ww - cod	
1012109-006A	Trip Blank	12/6/2010 3:00:00 PM		12/8/2010		624-W	☑	voc	3

Client DWQ

Address 195 N 1950 W

SLC City UT State 84114 Zip

Phone 541 3069 Fax

Contact JAMES HARRIS

E-mail jamesharris@utah.gov

Project Name RED BUTTE SPILL

Project Number/P.O.#

Sampler Name J. HARRIS

AMERICAN WEST ANALYTICAL LABORATORIES
463 West 3600 South
Salt Lake City, Utah 84115
(801) 263-8686
(888) 263-8686
Fax (801) 263-8687
Email:awal@awal-labs.com

CHAIN OF CUSTODY

Lab Sample Set # 1012109

Page 1 of 1

Turn Around Time (Circle One)

(1 day) 2 day 3 day 4 day 5 day Standard

Sample ID	Date/Time Collected	Matrix	Number of Containers (Total)	TESTS REQUIRED: TRPH	Fractn.	Oil & Grease	VOCs	SVOCs	COD	QC LEVEL: 1 2 (2+) 3 3+ 4 — COMMENTS
RB AB GARDENS 4992095	12/6/10 1515		12						X	
RB NR GREENHOUSE 4992088	12/6/10 1545		15						X	MS/MSD
RB @ FOOTHILL 4992086	12/6/10 1615		12						X	
RB @ MILLER PK 4992084	12/6/10 1640		12						X	
RB @ 1100 E 4992083	12/6/10 1700		12						X	
Trip Blank	12/6/10 1500		3				X			

LABORATORY USE ONLY

SAMPLES WERE:

1 Shipped or hand delivered
Notes:

2 (Ambient) or Chilled
Notes:

3 Temperature 1.4

4 Received Broken/Leaking (Improperly Sealed)
Y (N)
Notes:

5 Properly Preserved
Y N
Checked at Bench
Y N
Notes:

6 Received Within Holding Times
Y N
Notes:

COC Tape Was:

1 Present on Outer Package
Y (N) NA

2 Unbroken on Outer Package
Y N (NA)

3 Present on Sample
Y (N) NA

4 Unbroken on Sample
Y N (NA)

Discrepancies Between Sample Labels and COC Record?
Y (N)
Notes:

Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME JAMES HARRIS	Time 1732	PRINT NAME Samantha Broadhead	Time 1732
Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME	Time	PRINT NAME	Time
Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME	Time	PRINT NAME	Time
Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME	Time	PRINT NAME	Time

Special Instructions:

Sample Set: 1012109

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_2SO_4																
COD	pH <2 H_2SO_4	✓															
Cyanide	PH >12 NaOH																
Metals	pH <2 HNO_3																
NO_2 & NO_3	pH <2 H_2SO_4																
Nutrients	pH <2 H_2SO_4																
O & G	pH <2 HCL	✓															
Phenols	pH <2 H_2SO_4																
Sulfide	pH > 9NaOH, Zn Acetate																
TKN	pH <2 H_2SO_4																
TOC	pH <2 H_3PO_4																
TOX	pH <2 H_2SO_4																
T PO_4	pH <2 H_2SO_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