



Galen Williams
EarthFax Engineering
7324 So. Union Park Ave., # 100
Midvale, UT 84047
TEL: (801) 561-1555

RE: Red Butte Release / 1300-11

Dear Galen Williams:

Lab Set ID: 1111038

463 West 3600 South
Salt Lake City, UT 84115

American West Analytical Laboratories received 8 sample(s) on 11/2/2011 for the analyses presented in the following report.

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

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, Idaho, and Missouri. Certification document is available upon request. If you have any questions or concerns regarding this report please feel free to call.

web: www.awal-labs.com

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

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Thank You,

Approved by: _____
Laboratory Director or designee



INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-001
Client Sample ID: MOSS-1
Collection Date: 11/2/2011 0935h
Received Date: 11/2/2011 1210h

Analytical Results

463 West 3600 South
Salt Lake City, UT 84115

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Total Recoverable Petroleum Hydrocarbons	mg/kg-dry		11/2/2011 1650h	E1664A-SGT	245	< 245	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer



INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-002
Client Sample ID: MOBD-1
Collection Date: 11/2/2011 1000h
Received Date: 11/2/2011 1210h

Analytical Results

463 West 3600 South
Salt Lake City, UT 84115

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Total Recoverable Petroleum Hydrocarbons	mg/kg-dry		11/2/2011 1650h	E1664A-SGT	247	< 247	

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INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-003
Client Sample ID: MOSS-2
Collection Date: 11/2/2011 1010h
Received Date: 11/2/2011 1210h

Analytical Results

463 West 3600 South
Salt Lake City, UT 84115

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Total Recoverable Petroleum Hydrocarbons	mg/kg-dry		11/2/2011 1650h	E1664A-SGT	190	< 190	

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Jose Rocha
QA Officer



INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-004
Client Sample ID: MOSS-3
Collection Date: 11/2/2011 1030h
Received Date: 11/2/2011 1210h

Analytical Results

463 West 3600 South
Salt Lake City, UT 84115

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Total Recoverable Petroleum Hydrocarbons	mg/kg-dry		11/2/2011 1650h	E1664A-SGT	234	< 234	

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INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-006
Client Sample ID: MOEB-1
Collection Date: 11/2/2011 1050h
Received Date: 11/2/2011 1210h

Analytical Results

463 West 3600 South
Salt Lake City, UT 84115

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Total Recoverable Petroleum Hydrocarbons	mg/L		11/2/2011 1531h	E1664A-SGT	3.00	3.45	

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Jose Rocha
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INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-007
Client Sample ID: MOFB-1
Collection Date: 11/2/2011 1100h
Received Date: 11/2/2011 1210h

Analytical Results

463 West 3600 South
Salt Lake City, UT 84115

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Total Recoverable Petroleum Hydrocarbons	mg/L		11/2/2011 1531h	E1664A-SGT	3.00	< 3.00	

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INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-008
Client Sample ID: MOSS-4
Collection Date: 11/2/2011 1110h
Received Date: 11/2/2011 1210h

Analytical Results

463 West 3600 South
Salt Lake City, UT 84115

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Total Recoverable Petroleum Hydrocarbons	mg/kg-dry		11/2/2011 1650h	E1664A-SGT	184	< 184	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-001B
Client Sample ID: MOSS-1
Collection Date: 11/2/2011 0935h
Received Date: 11/2/2011 1210h **Method:** SW8015D

Analytical Results

TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 11/2/2011 2020h **Extracted:** 11/2/2011 1427h

Units: mg/kg-dry

Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	32.6	89.4	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	42.0	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-002B
Client Sample ID: MOBD-1
Collection Date: 11/2/2011 1000h
Received Date: 11/2/2011 1210h **Method:** SW8015D

Analytical Results

TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 11/2/2011 2158h **Extracted:** 11/2/2011 1427h

Units: mg/kg-dry

Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	32.9	66.8	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	43.5	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-003B
Client Sample ID: MOSS-2
Collection Date: 11/2/2011 1010h
Received Date: 11/2/2011 1210h **Method:** SW8015D

Analytical Results

TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 11/2/2011 2217h **Extracted:** 11/2/2011 1427h

Units: mg/kg-dry

Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	25.4	70.4	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	57.4	

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Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-004B
Client Sample ID: MOSS-3
Collection Date: 11/2/2011 1030h
Received Date: 11/2/2011 1210h **Method:** SW8015D

Analytical Results

TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 11/2/2011 2315h **Extracted:** 11/2/2011 1427h

Units: mg/kg-dry

Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	31.2	290	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	51.0	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-006B
Client Sample ID: MOEB-1
Collection Date: 11/2/2011 1050h
Received Date: 11/2/2011 1210h **Method:** SW8015D

Analytical Results

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

Analyzed: 11/3/2011 0112h **Extracted:** 11/2/2011 1500h

Units: mg/L

Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	0.500	< 0.500	
Surr: 4-Bromofluorobenzene	460-00-4	10-190	54.6	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-007B
Client Sample ID: MOFB-1
Collection Date: 11/2/2011 1100h
Received Date: 11/2/2011 1210h **Method:** SW8015D

Analytical Results

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

Analyzed: 11/3/2011 0211h **Extracted:** 11/2/2011 1500h

Units: mg/L

Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	0.500	< 0.500	
Surr: 4-Bromofluorobenzene	460-00-4	10-190	49.5	

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Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-008B
Client Sample ID: MOSS-4
Collection Date: 11/2/2011 1110h
Received Date: 11/2/2011 1210h **Method:** SW8015D

Analytical Results

TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 11/2/2011 2335h **Extracted:** 11/2/2011 1427h

Units: mg/kg-dry

Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	24.6	215	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	50.2	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-001A
Client Sample ID: MOSS-1
Collection Date: 11/2/2011 0935h
Received Date: 11/2/2011 1210h

Contact: Galen Williams

Method: SW8260C

Analytical Results

VOAs MBTEXN/GRO by GC/MS Method 8260C

Analyzed: 11/2/2011 2326h

Units: mg/kg-dry

Dilution Factor: 2.53

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzene	71-43-2	0.00412	< 0.00412	
Ethylbenzene	100-41-4	0.00825	< 0.00825	
Naphthalene	91-20-3	0.00825	< 0.00825	
Toluene	108-88-3	0.00825	< 0.00825	
Xylenes, Total	1330-20-7	0.00825	< 0.00825	
TPH C6-C10 (GRO)		0.0825	< 0.0825	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	103	
Surr: 4-Bromofluorobenzene	460-00-4	71-144	112	
Surr: Dibromofluoromethane	1868-53-7	71-129	97.4	
Surr: Toluene-d8	2037-26-5	72-129	109	

Sampling and analytical preparation performed by method 5030C.



ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-002A
Client Sample ID: MOBD-1
Collection Date: 11/2/2011 1000h
Received Date: 11/2/2011 1210h

Contact: Galen Williams

Method: SW8260C

Analytical Results

VOAs MBTEXN/GRO by GC/MS Method 8260C

Analyzed: 11/3/2011 0032h

Units: mg/kg-dry

Dilution Factor: 2.49

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzene	71-43-2	0.00409	< 0.00409	
Ethylbenzene	100-41-4	0.00819	< 0.00819	
Naphthalene	91-20-3	0.00819	< 0.00819	
Toluene	108-88-3	0.00819	< 0.00819	
Xylenes, Total	1330-20-7	0.00819	< 0.00819	
TPH C6-C10 (GRO)		0.0819	< 0.0819	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	104	
Surr: 4-Bromofluorobenzene	460-00-4	71-144	113	
Surr: Dibromofluoromethane	1868-53-7	71-129	98.0	
Surr: Toluene-d8	2037-26-5	72-129	110	

Sampling and analytical preparation performed by method 5030C.



ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-003A
Client Sample ID: MOSS-2
Collection Date: 11/2/2011 1010h
Received Date: 11/2/2011 1210h **Method:** SW8260C

Analytical Results

VOAs MBTEXN/GRO by GC/MS Method 8260C

Analyzed: 11/3/2011 0054h

Units: mg/kg-dry

Dilution Factor: 2.53

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzene	71-43-2	0.00321	< 0.00321	
Ethylbenzene	100-41-4	0.00642	< 0.00642	
Naphthalene	91-20-3	0.00642	< 0.00642	
Toluene	108-88-3	0.00642	< 0.00642	
Xylenes, Total	1330-20-7	0.00642	< 0.00642	
TPH C6-C10 (GRO)		0.0642	< 0.0642	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	101	
Surr: 4-Bromofluorobenzene	460-00-4	71-144	108	
Surr: Dibromofluoromethane	1868-53-7	71-129	96.8	
Surr: Toluene-d8	2037-26-5	72-129	109	

Sampling and analytical preparation performed by method 5030C.



ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-004A
Client Sample ID: MOSS-3
Collection Date: 11/2/2011 1030h
Received Date: 11/2/2011 1210h

Contact: Galen Williams

Method: SW8260C

Analytical Results

VOAs MBTEXN/GRO by GC/MS Method 8260C

Analyzed: 11/3/2011 0839h

Units: mg/kg-dry

Dilution Factor: 2.53

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzene	71-43-2	0.00395	< 0.00395	
Ethylbenzene	100-41-4	0.00789	< 0.00789	
Naphthalene	91-20-3	0.00789	< 0.00789	
Toluene	108-88-3	0.00789	< 0.00789	
Xylenes, Total	1330-20-7	0.00789	< 0.00789	
TPH C6-C10 (GRO)		0.0789	< 0.0789	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	110	
Surr: 4-Bromofluorobenzene	460-00-4	71-144	114	
Surr: Dibromofluoromethane	1868-53-7	71-129	97.9	
Surr: Toluene-d8	2037-26-5	72-129	108	

Sampling and analytical preparation performed by method 5030C.



ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-005A
Client Sample ID: MOTB-1
Collection Date: 11/2/2011 1040h
Received Date: 11/2/2011 1210h **Method:** SW8260C

Analytical Results

VOAs MBTEXN/GRO by GC/MS Method 8260C/5030C

Analyzed: 11/3/2011 0200h

Units: mg/L

Dilution Factor: 1

Compound

**CAS
Number**

**Reporting
Limit**

**Analytical
Result**

Qual

Benzene	71-43-2	0.00100	< 0.00100	
Ethylbenzene	100-41-4	0.00200	< 0.00200	
Naphthalene	91-20-3	0.00200	< 0.00200	
Toluene	108-88-3	0.00200	< 0.00200	
Xylenes, Total	1330-20-7	0.00200	< 0.00200	
TPH C6-C10 (GRO)		0.0200	< 0.0200	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	103	
Surr: 4-Bromofluorobenzene	460-00-4	80-123	99.7	
Surr: Dibromofluoromethane	1868-53-7	80-124	97.0	
Surr: Toluene-d8	2037-26-5	80-125	102	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-006A
Client Sample ID: MOEB-1
Collection Date: 11/2/2011 1050h
Received Date: 11/2/2011 1210h **Method:** SW8260C

Analytical Results

VOAs MBTEXN/GRO by GC/MS Method 8260C/5030C

Analyzed: 11/3/2011 0222h

Units: mg/L

Dilution Factor: 1

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Laboratory Director

Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzene	71-43-2	0.00100	< 0.00100	
Ethylbenzene	100-41-4	0.00200	< 0.00200	
Naphthalene	91-20-3	0.00200	< 0.00200	
Toluene	108-88-3	0.00200	< 0.00200	
Xylenes, Total	1330-20-7	0.00200	< 0.00200	
TPH C6-C10 (GRO)		0.0200	< 0.0200	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	109	
Surr: 4-Bromofluorobenzene	460-00-4	80-123	96.8	
Surr: Dibromofluoromethane	1868-53-7	80-124	97.8	
Surr: Toluene-d8	2037-26-5	80-125	102	



ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-007A
Client Sample ID: MOFB-1
Collection Date: 11/2/2011 1100h
Received Date: 11/2/2011 1210h **Method:** SW8260C

Analytical Results

VOAs MBTEXN/GRO by GC/MS Method 8260C/5030C

Analyzed: 11/3/2011 0245h

Units: mg/L

Dilution Factor: 1

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzene	71-43-2	0.00100	< 0.00100	
Ethylbenzene	100-41-4	0.00200	< 0.00200	
Naphthalene	91-20-3	0.00200	< 0.00200	
Toluene	108-88-3	0.00200	< 0.00200	
Xylenes, Total	1330-20-7	0.00200	< 0.00200	
TPH C6-C10 (GRO)		0.0200	< 0.0200	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	106	
Surr: 4-Bromofluorobenzene	460-00-4	80-123	96.8	
Surr: Dibromofluoromethane	1868-53-7	80-124	96.9	
Surr: Toluene-d8	2037-26-5	80-125	102	



ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte Release / 1300-11
Lab Sample ID: 1111038-008A
Client Sample ID: MOSS-4
Collection Date: 11/2/2011 1110h
Received Date: 11/2/2011 1210h **Method:** SW8260C

Analytical Results

VOAs MBTEXN/GRO by GC/MS Method 8260C

Analyzed: 11/3/2011 0138h

Units: mg/kg-dry

Dilution Factor: 2.54

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzene	71-43-2	0.00312	< 0.00312	
Ethylbenzene	100-41-4	0.00624	< 0.00624	
Naphthalene	91-20-3	0.00624	< 0.00624	
Toluene	108-88-3	0.00624	< 0.00624	
Xylenes, Total	1330-20-7	0.00624	< 0.00624	
TPH C6-C10 (GRO)		0.0624	< 0.0624	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	102	
Surr: 4-Bromofluorobenzene	460-00-4	71-144	98.6	
Surr: Dibromofluoromethane	1868-53-7	71-129	96.3	
Surr: Toluene-d8	2037-26-5	72-129	105	

Sampling and analytical preparation performed by method 5030C.



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Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: EarthFax Engineering
Lab Set ID: 1111038
Project: Red Butte Release / 1300-11

Contact: Galen Williams
Dept: WC
QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-R33350	Total Recoverable Petroleum Hydrocarbons	mg/kg	E1664A-SGT	1,220	1,000	0	122	64-132				11/2/2011 1650h
LCS-R33349	Total Recoverable Petroleum Hydrocarbons	mg/L	E1664A-SGT	16.0	20.00	0	80.0	64-132				11/2/2011 1531h



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Jose Rocha
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QC SUMMARY REPORT

Client: EarthFax Engineering
Lab Set ID: 1111038
Project: Red Butte Release / 1300-11

Contact: Galen Williams
Dept: WC
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-R33350	Total Recoverable Petroleum Hydrocarbons	mg/kg	E1664A-SGT	< 150				-				11/2/2011 1650h
MB-R33349	Total Recoverable Petroleum Hydrocarbons	mg/L	E1664A-SGT	< 3.00				-				11/2/2011 1531h



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Jose Rocha
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QC SUMMARY REPORT

Client: EarthFax Engineering
Lab Set ID: 1111038
Project: Red Butte Release / 1300-11

Contact: Galen Williams
Dept: WC
QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1111038-001CMS	Total Recoverable Petroleum Hydrocarbons	mg/kg-dry	E1664A-SGT	1,880	1,630	74.14	111	64-132				11/2/2011 1650h



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QC SUMMARY REPORT

Client: EarthFax Engineering
Lab Set ID: 1111038
Project: Red Butte Release / 1300-11

Contact: Galen Williams
Dept: WC
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1111038-001CMSD	Total Recoverable Petroleum Hydrocarbons	mg/kg-dry	E1664A-SGT	1,810	1,630	74.14	107	64-132	4.01	34		11/2/2011 1650h



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QC SUMMARY REPORT

Client: EarthFax Engineering
Lab Set ID: 1111038
Project: Red Butte Release / 1300-11

Contact: Galen Williams
Dept: WC
QC Type: QCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
QCS-R33349	Total Recoverable Petroleum Hydrocarbons	mg/L	E1664A-SGT	17.8	20.00	0	89.0	64-132				11/2/2011 1531h



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QC SUMMARY REPORT

Client: EarthFax Engineering
Lab Set ID: 1111038
Project: Red Butte Release / 1300-11

Contact: Galen Williams
Dept: WC
QC Type: QCSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
QCSD-R33349	Total Recoverable Petroleum Hydrocarbons	mg/L	E1664A-SGT	15.0	20.00	0	75.0	64-132	17.1	34		11/2/2011 1531h



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QC SUMMARY REPORT

Client: EarthFax Engineering
Lab Set ID: 1111038
Project: Red Butte Release / 1300-11

Contact: Galen Williams
Dept: GC
QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-15350	Diesel Range Organics (DRO) (C10-C28)	mg/kg	SW8015D	129	166.7	0	77.3	38-123				11/2/2011 1607h
LCS-15350	Surr: 4-Bromofluorobenzene	%REC	SW8015D	17.9	33.33		53.6	35-105				11/2/2011 1607h
LCS-15349	Diesel Range Organics (DRO) (C10-C28)	mg/L	SW8015D	1.47	2.000	0	73.6	48-118				11/2/2011 1607h
LCS-15349	Surr: 4-Bromofluorobenzene	%REC	SW8015D	0.169	0.4000		42.2	18-95				11/2/2011 1607h



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QC SUMMARY REPORT

Client: EarthFax Engineering
Lab Set ID: 1111038
Project: Red Butte Release / 1300-11

Contact: Galen Williams
Dept: GC
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-15350	Diesel Range Organics (DRO) (C10-C28)	mg/kg	SW8015D	< 20.0				-				11/2/2011 1547h
MB-15350	Surr: 4-Bromofluorobenzene	%REC	SW8015D	18.3	33.33		55.0	35-105				11/2/2011 1547h
MB-15349	Diesel Range Organics (DRO) (C10-C28)	mg/L	SW8015D	< 0.500				-				11/2/2011 1547h
MB-15349	Surr: 4-Bromofluorobenzene	%REC	SW8015D	0.149	0.4000		37.2	18-95				11/2/2011 1547h



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QC SUMMARY REPORT

Client: EarthFax Engineering
Lab Set ID: 1111038
Project: Red Butte Release / 1300-11

Contact: Galen Williams
Dept: GC
QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1111038-001BMS	Diesel Range Organics (DRO) (C10-C28)	mg/kg-dry	SW8015D	298	271.7	89.40	76.7	10-230				11/2/2011 2039h
1111038-001BMS	Surr: 4-Bromofluorobenzene	%REC	SW8015D	26.0	54.34		47.8	10-122				11/2/2011 2039h
1111038-006BMS	Diesel Range Organics (DRO) (C10-C28)	mg/L	SW8015D	3.09	4.000	0	77.4	60-161				11/3/2011 0132h
1111038-006BMS	Surr: 4-Bromofluorobenzene	%REC	SW8015D	0.473	0.8000		59.1	10-190				11/3/2011 0132h



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QC SUMMARY REPORT

Client: EarthFax Engineering
Lab Set ID: 1111038
Project: Red Butte Release / 1300-11

Contact: Galen Williams
Dept: GC
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1111038-001BMSD	Diesel Range Organics (DRO) (C10-C28)	mg/kg-dry	SW8015D	263	271.7	89.40	63.7	10-230	12.6	25		11/2/2011 2059h
1111038-001BMSD	Surr: 4-Bromofluorobenzene	%REC	SW8015D	24.2	54.34		44.6	10-122				11/2/2011 2059h
1111038-006BMSD	Diesel Range Organics (DRO) (C10-C28)	mg/L	SW8015D	3.16	4.000	0	78.9	60-161	2	25		11/3/2011 0151h
1111038-006BMSD	Surr: 4-Bromofluorobenzene	%REC	SW8015D	0.474	0.8000		59.3	10-190				11/3/2011 0151h



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QC SUMMARY REPORT

Client: EarthFax Engineering
Lab Set ID: 1111038
Project: Red Butte Release / 1300-11

Contact: Galen Williams
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 110211B	Benzene	mg/kg	SW8260C	0.0186	0.02000	0	93.1	60-130				11/2/2011 2219h
LCS VOC 110211B	Ethylbenzene	mg/kg	SW8260C	0.0190	0.02000	0	94.8	69-147				11/2/2011 2219h
LCS VOC 110211B	Naphthalene	mg/kg	SW8260C	0.0154	0.02000	0	77.0	40-131				11/2/2011 2219h
LCS VOC 110211B	Toluene	mg/kg	SW8260C	0.0190	0.02000	0	95.1	61-140				11/2/2011 2219h
LCS VOC 110211B	Xylenes, Total	mg/kg	SW8260C	0.0583	0.06000	0	97.2	72-147				11/2/2011 2219h
LCS VOC 110211B	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	0.0476	0.05000		95.2	73-132				11/2/2011 2219h
LCS VOC 110211B	Surr: 4-Bromofluorobenzene	%REC	SW8260C	0.0484	0.05000		96.7	85-115				11/2/2011 2219h
LCS VOC 110211B	Surr: Dibromofluoromethane	%REC	SW8260C	0.0465	0.05000		93.0	84-121				11/2/2011 2219h
LCS VOC 110211B	Surr: Toluene-d8	%REC	SW8260C	0.0516	0.05000		103	85-115				11/2/2011 2219h
LCS VOC 110311A	Benzene	mg/kg	SW8260C	0.0194	0.02000	0	96.9	60-130				11/3/2011 0733h
LCS VOC 110311A	Ethylbenzene	mg/kg	SW8260C	0.0193	0.02000	0	96.6	69-147				11/3/2011 0733h
LCS VOC 110311A	Naphthalene	mg/kg	SW8260C	0.0164	0.02000	0	82.2	40-131				11/3/2011 0733h
LCS VOC 110311A	Toluene	mg/kg	SW8260C	0.0191	0.02000	0	95.4	61-140				11/3/2011 0733h
LCS VOC 110311A	Xylenes, Total	mg/kg	SW8260C	0.0596	0.06000	0	99.4	72-147				11/3/2011 0733h
LCS VOC 110311A	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	0.0542	0.05000		108	73-132				11/3/2011 0733h
LCS VOC 110311A	Surr: 4-Bromofluorobenzene	%REC	SW8260C	0.0462	0.05000		92.3	85-115				11/3/2011 0733h
LCS VOC 110311A	Surr: Dibromofluoromethane	%REC	SW8260C	0.0484	0.05000		96.7	84-121				11/3/2011 0733h
LCS VOC 110311A	Surr: Toluene-d8	%REC	SW8260C	0.0498	0.05000		99.5	85-115				11/3/2011 0733h
LCS VOC 110211B	Benzene	mg/L	SW8260C	0.0186	0.02000	0	93.1	62-127				11/2/2011 2219h
LCS VOC 110211B	Ethylbenzene	mg/L	SW8260C	0.0190	0.02000	0	94.8	55-133				11/2/2011 2219h
LCS VOC 110211B	Naphthalene	mg/L	SW8260C	0.0154	0.02000	0	77.0	28-136				11/2/2011 2219h
LCS VOC 110211B	Toluene	mg/L	SW8260C	0.0190	0.02000	0	95.1	67-128				11/2/2011 2219h
LCS VOC 110211B	Xylenes, Total	mg/L	SW8260C	0.0583	0.06000	0	97.2	52-130				11/2/2011 2219h



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: EarthFax Engineering
Lab Set ID: 1111038
Project: Red Butte Release / 1300-11

Contact: Galen Williams
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 110211B	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	0.0476	0.05000		95.2	69-132				11/2/2011 2219h
LCS VOC 110211B	Surr: 4-Bromofluorobenzene	%REC	SW8260C	0.0484	0.05000		96.7	85-118				11/2/2011 2219h
LCS VOC 110211B	Surr: Dibromofluoromethane	%REC	SW8260C	0.0465	0.05000		93.0	80-120				11/2/2011 2219h
LCS VOC 110211B	Surr: Toluene-d8	%REC	SW8260C	0.0516	0.05000		103	81-120				11/2/2011 2219h



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QA Officer

QC SUMMARY REPORT

Client: EarthFax Engineering
Lab Set ID: 1111038
Project: Red Butte Release / 1300-11

Contact: Galen Williams
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 110211B	Benzene	mg/kg	SW8260C	< 0.00100				-				11/2/2011 2304h
MB VOC 110211B	Ethylbenzene	mg/kg	SW8260C	< 0.00200				-				11/2/2011 2304h
MB VOC 110211B	Naphthalene	mg/kg	SW8260C	< 0.00200				-				11/2/2011 2304h
MB VOC 110211B	Toluene	mg/kg	SW8260C	< 0.00200				-				11/2/2011 2304h
MB VOC 110211B	TPH C6-C10 (GRO)	mg/kg	SW8260C	< 0.0200				-				11/2/2011 2304h
MB VOC 110211B	Xylenes, Total	mg/kg	SW8260C	< 0.00200				-				11/2/2011 2304h
MB VOC 110211B	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	0.0493	0.05000		98.7	73-132				11/2/2011 2304h
MB VOC 110211B	Surr: 4-Bromofluorobenzene	%REC	SW8260C	0.0499	0.05000		99.8	85-115				11/2/2011 2304h
MB VOC 110211B	Surr: Dibromofluoromethane	%REC	SW8260C	0.0485	0.05000		97.0	84-121				11/2/2011 2304h
MB VOC 110211B	Surr: Toluene-d8	%REC	SW8260C	0.0520	0.05000		104	85-115				11/2/2011 2304h
MB VOC 110311A	Benzene	mg/kg	SW8260C	< 0.00100				-				11/3/2011 0817h
MB VOC 110311A	Ethylbenzene	mg/kg	SW8260C	< 0.00200				-				11/3/2011 0817h
MB VOC 110311A	Naphthalene	mg/kg	SW8260C	< 0.00200				-				11/3/2011 0817h
MB VOC 110311A	Toluene	mg/kg	SW8260C	< 0.00200				-				11/3/2011 0817h
MB VOC 110311A	TPH C6-C10 (GRO)	mg/kg	SW8260C	< 0.0200				-				11/3/2011 0817h
MB VOC 110311A	Xylenes, Total	mg/kg	SW8260C	< 0.00200				-				11/3/2011 0817h
MB VOC 110311A	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	0.0557	0.05000		111	73-132				11/3/2011 0817h
MB VOC 110311A	Surr: 4-Bromofluorobenzene	%REC	SW8260C	0.0478	0.05000		95.6	85-115				11/3/2011 0817h
MB VOC 110311A	Surr: Dibromofluoromethane	%REC	SW8260C	0.0496	0.05000		99.1	84-121				11/3/2011 0817h
MB VOC 110311A	Surr: Toluene-d8	%REC	SW8260C	0.0496	0.05000		99.1	85-115				11/3/2011 0817h
MB VOC 110211B	Benzene	mg/L	SW8260C	< 0.00100				-				11/2/2011 2304h
MB VOC 110211B	Ethylbenzene	mg/L	SW8260C	< 0.00200				-				11/2/2011 2304h
MB VOC 110211B	Naphthalene	mg/L	SW8260C	< 0.00200				-				11/2/2011 2304h



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QC SUMMARY REPORT

Client: EarthFax Engineering

Lab Set ID: 1111038

Project: Red Butte Release / 1300-11

Contact: Galen Williams

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 110211B	Toluene	mg/L	SW8260C	< 0.00200				-				11/2/2011 2304h
MB VOC 110211B	TPH C6-C10 (GRO)	mg/L	SW8260C	< 0.0200				-				11/2/2011 2304h
MB VOC 110211B	Xylenes, Total	mg/L	SW8260C	< 0.00200				-				11/2/2011 2304h
MB VOC 110211B	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	0.0493	0.05000		98.7	69-132				11/2/2011 2304h
MB VOC 110211B	Surr: 4-Bromofluorobenzene	%REC	SW8260C	0.0499	0.05000		99.8	85-118				11/2/2011 2304h
MB VOC 110211B	Surr: Dibromofluoromethane	%REC	SW8260C	0.0485	0.05000		97.0	80-120				11/2/2011 2304h
MB VOC 110211B	Surr: Toluene-d8	%REC	SW8260C	0.0520	0.05000		104	81-120				11/2/2011 2304h



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QC SUMMARY REPORT

Client: EarthFax Engineering
Lab Set ID: 1111038
Project: Red Butte Release / 1300-11

Contact: Galen Williams
Dept: MSVOA
QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1111038-001AMS	Benzene	mg/kg-dry	SW8260C	0.0755	0.08249	0	91.5	17-138				11/2/2011 2348h
1111038-001AMS	Ethylbenzene	mg/kg-dry	SW8260C	0.0778	0.08249	0	94.3	10-164				11/2/2011 2348h
1111038-001AMS	Naphthalene	mg/kg-dry	SW8260C	0.0382	0.08249	0	46.3	13-156				11/2/2011 2348h
1111038-001AMS	Toluene	mg/kg-dry	SW8260C	0.0763	0.08249	0	92.4	23-168				11/2/2011 2348h
1111038-001AMS	Xylenes, Total	mg/kg-dry	SW8260C	0.231	0.2475	0	93.2	10-160				11/2/2011 2348h
1111038-001AMS	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	0.211	0.2062		102	68-147				11/2/2011 2348h
1111038-001AMS	Surr: 4-Bromofluorobenzene	%REC	SW8260C	0.224	0.2062		109	71-144				11/2/2011 2348h
1111038-001AMS	Surr: Dibromofluoromethane	%REC	SW8260C	0.199	0.2062		96.3	71-129				11/2/2011 2348h
1111038-001AMS	Surr: Toluene-d8	%REC	SW8260C	0.207	0.2062		100	72-129				11/2/2011 2348h
1111038-004AMS	Benzene	mg/kg-dry	SW8260C	0.0799	0.07925	0	101	17-138				11/3/2011 0901h
1111038-004AMS	Ethylbenzene	mg/kg-dry	SW8260C	0.0745	0.07925	0	94.1	10-164				11/3/2011 0901h
1111038-004AMS	Naphthalene	mg/kg-dry	SW8260C	0.0430	0.07925	0	54.3	13-156				11/3/2011 0901h
1111038-004AMS	Toluene	mg/kg-dry	SW8260C	0.0803	0.07925	0	101	23-168				11/3/2011 0901h
1111038-004AMS	Xylenes, Total	mg/kg-dry	SW8260C	0.224	0.2378	0	94.4	10-160				11/3/2011 0901h
1111038-004AMS	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	0.217	0.1981		110	68-147				11/3/2011 0901h
1111038-004AMS	Surr: 4-Bromofluorobenzene	%REC	SW8260C	0.214	0.1981		108	71-144				11/3/2011 0901h
1111038-004AMS	Surr: Dibromofluoromethane	%REC	SW8260C	0.192	0.1981		96.8	71-129				11/3/2011 0901h
1111038-004AMS	Surr: Toluene-d8	%REC	SW8260C	0.205	0.1981		103	72-129				11/3/2011 0901h
1111038-005AMS	Benzene	mg/L	SW8260C	0.0197	0.02000	0	98.6	66-145				11/3/2011 0307h
1111038-005AMS	Ethylbenzene	mg/L	SW8260C	0.0183	0.02000	0	91.4	69-133				11/3/2011 0307h
1111038-005AMS	Naphthalene	mg/L	SW8260C	0.0147	0.02000	0	73.6	41-131				11/3/2011 0307h
1111038-005AMS	Toluene	mg/L	SW8260C	0.0182	0.02000	0	91.0	18-192				11/3/2011 0307h
1111038-005AMS	Xylenes, Total	mg/L	SW8260C	0.0541	0.06000	0	90.1	42-167				11/3/2011 0307h



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: EarthFax Engineering
Lab Set ID: 1111038
Project: Red Butte Release / 1300-11

Contact: Galen Williams
Dept: MSVOA
QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1111038-005AMS	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	0.0549	0.05000		110	77-144				11/3/2011 0307h
1111038-005AMS	Surr: 4-Bromofluorobenzene	%REC	SW8260C	0.0463	0.05000		92.6	80-123				11/3/2011 0307h
1111038-005AMS	Surr: Dibromofluoromethane	%REC	SW8260C	0.0482	0.05000		96.3	80-124				11/3/2011 0307h
1111038-005AMS	Surr: Toluene-d8	%REC	SW8260C	0.0485	0.05000		97.1	80-125				11/3/2011 0307h



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: EarthFax Engineering
Lab Set ID: 1111038
Project: Red Butte Release / 1300-11

Contact: Galen Williams
Dept: MSVOA
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1111038-001AMSD	Benzene	mg/kg-dry	SW8260C	0.0746	0.08249	0	90.5	17-138	1.15	35		11/3/2011 0010h
1111038-001AMSD	Ethylbenzene	mg/kg-dry	SW8260C	0.0769	0.08249	0	93.2	10-164	1.17	35		11/3/2011 0010h
1111038-001AMSD	Naphthalene	mg/kg-dry	SW8260C	0.0385	0.08249	0	46.7	13-156	0.968	35		11/3/2011 0010h
1111038-001AMSD	Toluene	mg/kg-dry	SW8260C	0.0764	0.08249	0	92.6	23-168	0.162	35		11/3/2011 0010h
1111038-001AMSD	Xylenes, Total	mg/kg-dry	SW8260C	0.230	0.2475	0	92.9	10-160	0.251	35		11/3/2011 0010h
1111038-001AMSD	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	0.207	0.2062		100	68-147				11/3/2011 0010h
1111038-001AMSD	Surr: 4-Bromofluorobenzene	%REC	SW8260C	0.221	0.2062		107	71-144				11/3/2011 0010h
1111038-001AMSD	Surr: Dibromofluoromethane	%REC	SW8260C	0.197	0.2062		95.8	71-129				11/3/2011 0010h
1111038-001AMSD	Surr: Toluene-d8	%REC	SW8260C	0.217	0.2062		105	72-129				11/3/2011 0010h
1111038-004AMSD	Benzene	mg/kg-dry	SW8260C	0.0789	0.07800	0	101	17-138	1.29	35		11/3/2011 0923h
1111038-004AMSD	Ethylbenzene	mg/kg-dry	SW8260C	0.0736	0.07800	0	94.4	10-164	1.27	35		11/3/2011 0923h
1111038-004AMSD	Naphthalene	mg/kg-dry	SW8260C	0.0390	0.07800	0	50.0	13-156	9.74	35		11/3/2011 0923h
1111038-004AMSD	Toluene	mg/kg-dry	SW8260C	0.0789	0.07800	0	101	23-168	1.74	35		11/3/2011 0923h
1111038-004AMSD	Xylenes, Total	mg/kg-dry	SW8260C	0.221	0.2340	0	94.3	10-160	1.75	35		11/3/2011 0923h
1111038-004AMSD	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	0.210	0.1950		108	68-147				11/3/2011 0923h
1111038-004AMSD	Surr: 4-Bromofluorobenzene	%REC	SW8260C	0.217	0.1950		111	71-144				11/3/2011 0923h
1111038-004AMSD	Surr: Dibromofluoromethane	%REC	SW8260C	0.187	0.1950		95.7	71-129				11/3/2011 0923h
1111038-004AMSD	Surr: Toluene-d8	%REC	SW8260C	0.203	0.1950		104	72-129				11/3/2011 0923h
1111038-005AMSD	Benzene	mg/L	SW8260C	0.0203	0.02000	0	102	66-145	2.85	25		11/3/2011 0329h
1111038-005AMSD	Ethylbenzene	mg/L	SW8260C	0.0190	0.02000	0	94.8	69-133	3.65	25		11/3/2011 0329h
1111038-005AMSD	Naphthalene	mg/L	SW8260C	0.0149	0.02000	0	74.5	41-131	1.28	25		11/3/2011 0329h
1111038-005AMSD	Toluene	mg/L	SW8260C	0.0188	0.02000	0	94.2	18-192	3.51	25		11/3/2011 0329h
1111038-005AMSD	Xylenes, Total	mg/L	SW8260C	0.0562	0.06000	0	93.7	42-167	3.9	25		11/3/2011 0329h



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Laboratory Director

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QA Officer

QC SUMMARY REPORT

Client: EarthFax Engineering
Lab Set ID: 1111038
Project: Red Butte Release / 1300-11

Contact: Galen Williams
Dept: MSVOA
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1111038-005AMSD	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	0.0550	0.05000		110	77-144				11/3/2011 0329h
1111038-005AMSD	Surr: 4-Bromofluorobenzene	%REC	SW8260C	0.0474	0.05000		94.9	80-123				11/3/2011 0329h
1111038-005AMSD	Surr: Dibromofluoromethane	%REC	SW8260C	0.0492	0.05000		98.3	80-124				11/3/2011 0329h
1111038-005AMSD	Surr: Toluene-d8	%REC	SW8260C	0.0491	0.05000		98.2	80-125				11/3/2011 0329h

RUSH

American West Analytical Laboratories

D

WORK ORDER Summary

Client: EarthFax Engineering

Client ID: EAR100

Project: Red Butte Release / 1300-11

Comments: Next Day Rush - for purge, composite in lab.;

Contact: Galen Williams

QC Level: LEVEL II+

Work Order: 1111038

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WO Type: Standard *eh*

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1111038-001A	MOSS-1	11/2/2011 0935h	11/2/2011 1210h	11/3/2011	Soil	8260-S-PPM	<input checked="" type="checkbox"/>	Purge	1
1111038-001B						3546-TPH-PR	<input type="checkbox"/>	Hall-TPH	
						8015-S-TPH	<input checked="" type="checkbox"/>	Hall-TPH	
						PMOIST	<input type="checkbox"/>	Hall-TPH	
1111038-001C						OGF-S-1664SGT	<input type="checkbox"/>	OGFFridge	
1111038-002A	MOBD-1	11/2/2011 1000h				8260-S-PPM	<input checked="" type="checkbox"/>	Purge	
1111038-002B						3546-TPH-PR	<input type="checkbox"/>	Hall-TPH	
						8015-S-TPH	<input checked="" type="checkbox"/>	Hall-TPH	
						PMOIST	<input type="checkbox"/>	Hall-TPH	
1111038-002C						OGF-S-1664SGT	<input type="checkbox"/>	OGFFridge	
1111038-003A	MOSS-2	11/2/2011 1010h				8260-S-PPM	<input checked="" type="checkbox"/>	Purge	
1111038-003B						3546-TPH-PR	<input type="checkbox"/>	Hall-TPH	
						8015-S-TPH	<input checked="" type="checkbox"/>	Hall-TPH	
						PMOIST	<input type="checkbox"/>	Hall-TPH	
1111038-003C						OGF-S-1664SGT	<input type="checkbox"/>	OGFFridge	
1111038-004A	MOSS-3	11/2/2011 1030h				8260-S-PPM	<input checked="" type="checkbox"/>	Purge	
1111038-004B						3546-TPH-PR	<input type="checkbox"/>	Hall-TPH	
						8015-S-TPH	<input checked="" type="checkbox"/>	Hall-TPH	
						PMOIST	<input type="checkbox"/>	Hall-TPH	
1111038-004C						OGF-S-1664SGT	<input type="checkbox"/>	OGFFridge	
1111038-005A	MOTB-1	11/2/2011 1040h			Aqueous	8260-W-PPM	<input checked="" type="checkbox"/>	Purge	3
1111038-006A	MOEB-1	11/2/2011 1050h				8260-W-PPM	<input checked="" type="checkbox"/>	Purge	
1111038-006B						3510-TPH-PR	<input type="checkbox"/>	Hall-TPH (liters)	2
						8015-W-TPH(1L)	<input checked="" type="checkbox"/>	Hall-TPH (liters)	
1111038-006C						OGF-W-1664SGT	<input type="checkbox"/>	OGFFridge	1
1111038-006D							<input type="checkbox"/>	hold	3
1111038-007A	MOFB-1	11/2/2011 1100h		11/3/2011		8260-W-PPM	<input checked="" type="checkbox"/>	Purge	

WORK ORDER Summary

Client: EarthFax Engineering

Work Order: **1111038**

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Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1111038-007B	MOFB-1	11/2/2011 1100h	11/2/2011 1210h	11/3/2011	Aqueous	3510-TPH-PR	<input type="checkbox"/>	Hall-TPH (liters)	2
						8015-W-TPH(1L)	<input checked="" type="checkbox"/>	Hall-TPH (liters)	
1111038-007C						OGF-W-1664SGT	<input type="checkbox"/>	OGFFridge	1
1111038-007D							<input type="checkbox"/>	hold	3
1111038-008A	MOSS-4	11/2/2011 1110h		11/3/2011	Soil	8260-S-PPM	<input checked="" type="checkbox"/>	Purge	1
1111038-008B						3546-TPH-PR	<input type="checkbox"/>	Hall-TPH	
						8015-S-TPH	<input checked="" type="checkbox"/>	Hall-TPH	
						PMOIST	<input type="checkbox"/>	Hall-TPH	
1111038-008C						OGF-S-1664SGT	<input type="checkbox"/>	OGFFridge	

Client EarthFax Engineering
 Address 7324 South Union Park Ave.
Midvale UT 84047
 City State Zip

Phone (801) 561-1555 Fax _____

Contact Galen Williams

E-mail gwilliams@earthfax.com

Project Name Red Butte Release

Project Number/P.O.# 1300-11

Sampler Name Tim Jimenez



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CHAIN OF CUSTODY

Lab Sample Set # 1111038

Page _____ of _____

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						QC LEVEL				COMMENTS	
				TRPH	TPH DRG	TPH GRO	BTEXN	PAH (BZTSIF)	1	2	2+	3	3+		4
MOSS-1	11/2/11 09:35	S	3	X	X	X	X	X							
MOBD-2	10:00	S	3	X	X	X	X	X							
MOSS-2	10:10	S	3	X	X	X	X	X							
MOSS-3	10:30	S	3	X	X	X	X	X							
MOTB-1	10:40	w	3			X	X								
MOEB-1	10:50	w	9	X	X	X	X	X							
MOFB-1	11:00	w	9	X	X	X	X	X							
MOSS-4	11:10	S	3	X	X	X	X	X							

LABORATORY USE ONLY

SAMPLES WERE:

1 Shipped or hand delivered Notes: (circled)

2 Ambient or Chilled Notes: (circled)

3 Temperature 3.2

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

5 Properly Preserved Y N Checked at Bench Y N Notes: (circled)

6 Received Within Holding Times Y N Notes: (circled)

Relinquished By: Signature <u>[Signature]</u>	Date <u>11/2/11</u>	Received By: Signature <u>[Signature]</u>	Date <u>11/2/11</u>
PRINT NAME <u>Tim Jimenez</u>	Time <u>12:10</u>	PRINT NAME <u>Elma Hayward</u>	Time <u>12:10</u>
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:

- LAB COMP samples to be composited by AWAL for volatile compounds.

- Hold PAH samples until notice to proceed.

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: (circled)

Sample Set: 1111038

Preservation Check Sheet

Sample Set Extension and pH

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

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

Frequency: All samples requiring preservation