



April 5, 2013

Mr. Alex Fischer  
Environmental Supervisor  
Colorado Oil and Gas Conservation Commission  
1120 Lincoln Street, Suite 801  
Denver, Colorado 80203

Re: Site Investigation Update Report  
Walden Water Flood Facility  
COGCC Facility ID 428915  
SENW & NESW 2-T9N-R79W  
Jackson County, Colorado

### Background

On May 4, 2012, the Colorado Oil and Gas Conservation Commission (COGCC) notified Bonanza Creek Energy Operating Company, LLC. (Bonanza Creek) of a potential petroleum hydrocarbon release at their water flood facility located near Walden, Colorado. A carbon dioxide (CO<sub>2</sub>) facility operated by Praxair, Inc. (Praxair) is located approximately 500 feet to the west of the Bonanza Creek water flood facility. During site assessment activities conducted by Praxair, petroleum hydrocarbon impacted groundwater was discovered at their facility. The Bonanza Creek water flood facility was identified as a possible source of the groundwater impacts. In response to COGCC notification, Bonanza Creek representatives met on-site with Praxair and COGCC personnel on May 7, 2012. Bonanza Creek agreed to complete pressure tests for all their underground lines in an attempt to identify a potential source of the groundwater impacts. Bonanza Creek also agreed to conduct a subsurface soil and groundwater investigation to determine if the petroleum hydrocarbon impacts to groundwater originated from their site.

### Assessment

Bonanza Creek contracted LT Environmental, Inc. (LTE) in Arvada, Colorado to complete a subsurface soil and groundwater investigation at the subject site. On August 21 and 22, 2012, sixteen soil borings (SB01 through SB16) were advanced at the site to determine if soil and/or shallow groundwater impacts were present. Each soil boring was advanced into the shallow groundwater table using a truck-mounted direct-push drilling rig. The soil borings were continuously sampled by a field geologist and screened with a photoionization detector (PID) from the surface to a total depth of 15 feet below ground surface (bgs). Soil descriptions, field observations, and the PID headspace readings are recorded on the attached field boring logs.



One confirmation soil sample was collected from each soil boring to assess the extent and magnitude of the potential petroleum hydrocarbon impacts. In the absence of elevated PID headspace readings ( $>1.0$  parts per million), the confirmation soil sample was collected directly above the water table. The soil samples were submitted for laboratory analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260B and total petroleum hydrocarbons (TPH) by EPA Methods 8015 and 8260B.

Soil borings SB01 through SB16 were completed as monitoring wells MW01 through MW16, respectively. After properly developing the monitoring wells, groundwater samples were collected from wells MW01 through MW11, MW15, and MW16 on August 22, 2012. Monitoring wells MW12, MW13, and MW14 were dry during the August 22, 2012 sampling event. LTE returned to the site on November 7, 2012 and February 28, 2013 to perform two additional site-wide quarterly groundwater monitoring events. Groundwater samples were submitted for laboratory analysis of BTEX by EPA Method 8260B.

The groundwater monitoring wells will be professionally surveyed to determine precise vertical elevations and latitude/longitude coordinates for each monitoring well. The survey data will be used to calculate the relative groundwater elevation in each well, map the potentiometric surface of the water table, and determine the local groundwater flow direction at the site. A Site Map showing the monitoring well locations is presented as Figure 1.

### Analytical Results

TPH and BTEX concentrations in soil samples collected from soil borings SB01, SB04 through SB07, and SB10 through SB16 were below the Colorado Oil and Gas Conservation Commission (COGCC) allowable levels. TPH and/or benzene concentrations in soil samples collected from soil borings SB02, SB03, SB08, and SB09 exceeded COGCC allowable levels. BTEX concentrations in groundwater samples collected from monitoring wells MW01 through MW04, MW06, MW08 through MW11, and MW15 exceeded the Colorado Groundwater Quality Standards (CGWQS) during at least one quarterly monitoring event. BTEX concentrations in groundwater samples collected from monitoring wells MW05, MW07, MW12, MW13, MW14, and MW16 were below the CGWQS during the first three quarterly sampling events conducted in August 2012, November 2012, and February 2013. The soil and groundwater sample analytical results are summarized in Tables 1 and 2, respectively. The monitoring well locations and most recent (February 28, 2013) benzene results are shown on Figure 1. The laboratory analytical reports are attached.



2013 Update

Bonanza Creek continues to conduct pressure testing on underground lines at the water flood facility. A source of the petroleum hydrocarbon release has not yet been identified. Once a release source has been identified, a remediation Scope of Work will be submitted to the COGCC for review and approval. Groundwater monitoring will continue on a quarterly basis.

Please call me at (303) 433-9788 if you have any questions regarding this letter report or require additional information.

Sincerely,  
LT ENVIRONMENTAL, INC.

A handwritten signature in black ink that reads 'Aimee Cole'. The signature is written in a cursive, flowing style.

Aimee Cole  
Project Geologist

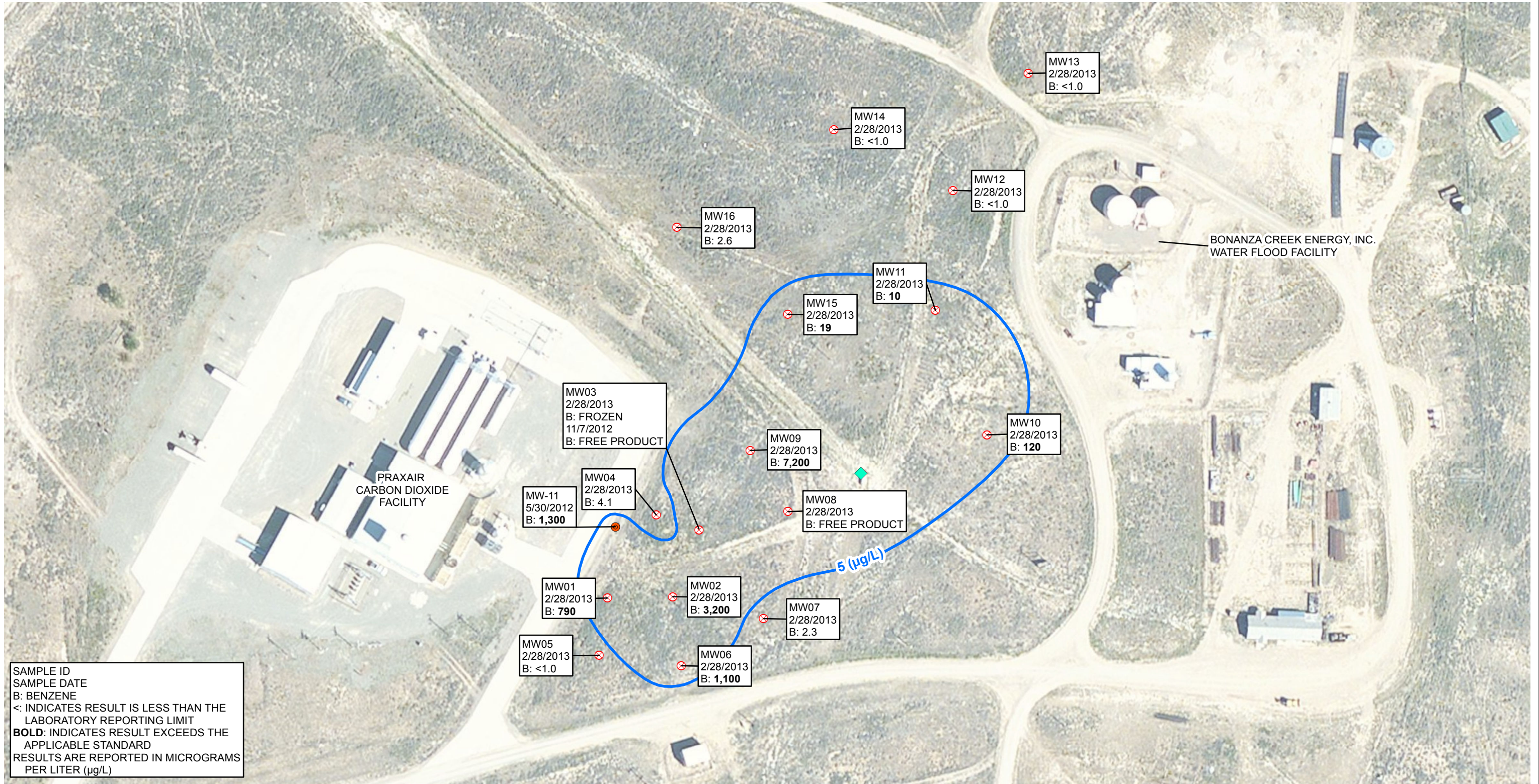
Reviewed by

A handwritten signature in black ink that reads 'John Cocroft'. The signature is written in a cursive, flowing style.

John Cocroft  
Client Manager

Attachments





SAMPLE ID  
SAMPLE DATE  
B: BENZENE  
<: INDICATES RESULT IS LESS THAN THE  
LABORATORY REPORTING LIMIT  
**BOLD**: INDICATES RESULT EXCEEDS THE  
APPLICABLE STANDARD  
RESULTS ARE REPORTED IN MICROGRAMS  
PER LITER (µg/L)

LEGEND

- ⊗ LTE MONITORING WELL
- PRAXAIR MONITORING WELL
- ◆ INJECTION WELL
- BENZENE ISOCONCENTRATION CONTOUR (µg/L)

IMAGE COURTESY OF ESRI/BING MAPS

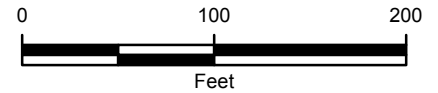


FIGURE 1  
SITE MAP  
WALDEN WATER FLOOD FACILITY  
SENW & NESW SEC 2-T9N-R79W  
JACKSON COUNTY, COLORADO  
BONANZA CREEK ENERGY OPERATING COMPANY LLC





**TABLE 1**  
**SOIL SAMPLE ANALYTICAL DATA**  
**WALDEN WATER FLOOD FACILITY**  
**BONANZA CREEK ENERGY OPERATING COMPANY LLC**

SAMPLE ID	SAMPLE DATE	DEPTH (feet bgs)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	XYLENES (Total) (mg/kg)	TPH-GRO (mg/kg)	TEPH DRO+ORO (mg/kg)
SB01@9.5'	8/21/2012	9.5	0.039	<0.0050	0.15	1.5	52	64
SB02@11'	8/21/2012	11	<b>0.76</b>	<0.0050	0.72	6.2	360	120
SB03@10.5'	8/21/2012	10.5	<b>0.17</b>	<0.0050	0.80	3.5	220	88
SB04@9.5'	8/21/2012	9.5	<0.0050	<0.0050	0.20	0.36	41	60
SB05@9.5'	8/21/2012	9.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	<50
SB06@14'	8/21/2012	14	0.026	<0.0050	0.038	0.15	5.8	<50
SB07@12'	8/21/2012	12	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	<50
SB08@9'	8/21/2012	9	<b>0.56</b>	3.7	1.1	11	<b>480</b>	<b>670</b>
SB09@10.5'	8/21/2012	10.5	<b>1.2</b>	11	3.8	52	<b>1,700</b>	<b>230</b>
SB10@12'	8/22/2012	12	<0.0050	0.0057	<0.0050	0.015	1.4	<50
SB11@11'	8/22/2012	11	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	66
SB12@9.5'	8/22/2012	9.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	<50
SB13@9.5'	8/22/2012	9.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	66
SB14@8.5'	8/22/2012	8.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	54
SB15@9'	8/22/2012	9	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	<50
SB16@8.5'	8/22/2012	8.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	<50
COGCC Allowable Level			0.17	85	100	175	500	

< - less than stated laboratory reporting limit

mg/kg - milligrams per kilogram

bgs - below ground surface

TPH - Total Petroleum Hydrocarbons

TEPH - Total Extractable Petroleum Hydrocarbons

Results noted in bold exceed COGCC allowable levels

GRO - Gasoline Range Organics

DRO - Diesel Range Organics

ORO - Oil Range Organics

COGCC -Colorado Oil and Gas Conservation Commission

**TABLE 2**  
**GROUNDWATER SAMPLE ANALYTICAL DATA**  
**WALDEN WATER FLOOD FACILITY**  
**BONANZA CREEK ENERGY OPERATING COMPANY LLC**

SAMPLE ID	SAMPLE DATE	DTW (feet bgs)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYLBENZENE (ug/L)	XYLENES (Total) (ug/L)
MW01	8/22/2012	9.03	<b>810</b>	1.3	400	840
	11/7/2012	10.30	<b>810</b>	<1.0	160	910
	2/28/2013	10.16	<b>790</b>	<1.0	210	570
MW02	8/22/2012	9.46	<b>2,100</b>	1.7	670	<b>5,400</b>
	11/7/2012	10.00	<b>2,400</b>	<1.0	<b>700</b>	<b>5,400</b>
	2/28/2013	10.15	<b>3,200</b>	<1.0	<b>740</b>	<b>4,300</b>
MW03	8/22/2012	8.96	<b>560</b>	100	480	<b>2,500</b>
	11/7/2012	9.84	<b>Product</b>	<b>Product</b>	<b>Product</b>	<b>Product</b>
	2/28/2012	Frozen	Frozen	Frozen	Frozen	Frozen
MW04	8/22/2012	9.13	<b>6.6</b>	7.9	200	410
	11/7/2012	10.50	2.5	<1.0	62	60
	2/28/2013	9.85	4.1	<1.0	66	58
MW05	8/22/2012	14.13	<1.0	<1.0	<1.0	2.2
	11/7/2012	8.00	<1.0	<1.0	<1.0	<1.0
	2/28/2013	10.18	<1.0	<1.0	<1.0	<1.0
MW06	8/22/2012	10.16	<b>1,200</b>	4.9	300	1,200
	11/7/2012	10.72	<b>9.8</b>	1.6	200	540
	2/28/2013	10.76	<b>1,100</b>	1.2	170	360
MW07	8/22/2012	9.74	1.5	1.2	4.6	33
	11/7/2012	9.90	2.0	<1.0	1.2	8.7
	2/28/2013	10.44	2.3	<1.0	<1.0	<1.0
MW08	8/22/2012	10.09	<b>7,000</b>	<b>13,000</b>	<b>830</b>	<b>7,800</b>
	11/7/2012	10.43	<b>Product</b>	<b>Product</b>	<b>Product</b>	<b>Product</b>
	2/28/2013	10.66	<b>Product</b>	<b>Product</b>	<b>Product</b>	<b>Product</b>
MW09	8/22/2012	9.47	<b>1,400</b>	<b>1,700</b>	200	<b>1,700</b>
	11/7/2012	11.41	<b>4,100</b>	<b>4,600</b>	430	<b>3,500</b>
	2/28/2013	10.01	<b>7,200</b>	<b>6,700</b>	680	<b>5,100</b>
MW10	8/22/2012	7.88	<b>100</b>	<1.0	3.5	14
	11/7/2012	8.66	<b>120</b>	5.2	5.1	30
	2/28/2013	10.75	<b>120</b>	<1.0	2.0	<1.0
MW11	8/22/2012	14.18	<1.0	<1.0	<1.0	<1.0
	11/7/2012	9.75	<1.0	<1.0	<1.0	<1.0
	2/28/2013	6.87	<b>10</b>	<1.0	2.8	16
MW12	8/22/2012	Dry	Dry	Dry	Dry	Dry
	11/7/2012	7.42	<1.0	<1.0	<1.0	<1.0
	2/28/2013	7.52	<1.0	<1.0	<1.0	<1.0
MW13	8/22/2012	Dry	Dry	Dry	Dry	Dry
	11/7/2012	9.01	<1.0	<1.0	<1.0	<1.0
	2/28/2013	9.27	<1.0	<1.0	<1.0	<1.0
MW14	8/22/2012	Dry	Dry	Dry	Dry	Dry
	11/7/2012	10.12	1.1	<1.0	<1.0	<1.0
	2/28/2013	10.01	<1.0	<1.0	<1.0	<1.0
MW15	8/22/2012	10.51	4.7	<1.0	<1.0	<1.0
	11/7/2012	8.37	<b>16</b>	<1.0	<1.0	<1.0
	2/28/2013	9.04	<b>19</b>	<1.0	<1.0	<1.0
MW16	8/22/2012	8.67	<1.0	<1.0	<1.0	<1.0
	11/7/2012	9.16	2.9	<1.0	<1.0	<1.0
	2/28/2013	8.99	2.6	<1.0	<1.0	<1.0
The Basic Standards for Groundwater			5	560	700	1,400

ug/L - Micrograms per liter

bgs - below ground surface

Results noted in bold exceed Colorado Department of Public Health and Environment (CDPHE)-Water Quality Control Commission (WQCC) Regulation 41-The Basic Standards for Groundwater

# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

September 04, 2012

John Cocroft

LT Environmental, Inc.

4600 West 60th Avenue

Arvada, CO 80003

RE: BC - Walden Water Flood Facility/Praxair Assess

Enclosed are the results of analyses for samples received by Summit Scientific on 08/23/12 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Joe Egry".

Joe Egry For Ben Shrewsbury

President / Laboratory Director



LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess

Project Number: 0345-12007  
Project Manager: John Cocroft

**Reported:**  
09/04/12 11:02

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB01@9.5'	R208158-01	Soil	08/21/12 10:55	08/23/12 16:00
SB02@11'	R208158-02	Soil	08/21/12 11:18	08/23/12 16:00
SB03@10.5'	R208158-03	Soil	08/21/12 11:35	08/23/12 16:00
SB04@9.5'	R208158-04	Soil	08/21/12 12:25	08/23/12 16:00
SB05@9.5'	R208158-05	Soil	08/21/12 15:10	08/23/12 16:00
SB06@14'	R208158-06	Soil	08/21/12 14:48	08/23/12 16:00
SB07@12'	R208158-07	Soil	08/21/12 14:22	08/23/12 16:00
SB08@9'	R208158-08	Soil	08/21/12 13:53	08/23/12 16:00
SB09@10.5'	R208158-09	Soil	08/21/12 13:40	08/23/12 16:00
SB10@12'	R208158-10	Soil	08/22/12 08:00	08/23/12 16:00
SB11@11'	R208158-11	Soil	08/22/12 08:20	08/23/12 16:00
SB12@9.5'	R208158-12	Soil	08/22/12 08:52	08/23/12 16:00
SB13@9.5'	R208158-13	Soil	08/22/12 09:20	08/23/12 16:00
SB14@8.5'	R208158-14	Soil	08/22/12 09:55	08/23/12 16:00
SB15@9'	R208158-15	Soil	08/22/12 10:17	08/23/12 16:00
SB16@8.5'	R208158-16	Soil	08/22/12 10:35	08/23/12 16:00
MW02	R208158-17	Water	08/22/12 12:20	08/23/12 16:00
MW09	R208158-18	Water	08/22/12 12:55	08/23/12 16:00
MW07	R208158-19	Water	08/22/12 12:45	08/23/12 16:00
MW11	R208158-20	Water	08/22/12 13:05	08/23/12 16:00
MW06	R208158-21	Water	08/22/12 12:40	08/23/12 16:00
MW10	R208158-22	Water	08/22/12 13:00	08/23/12 16:00
MW05	R208158-23	Water	08/22/12 12:35	08/23/12 16:00
MW01	R208158-24	Water	08/22/12 12:15	08/23/12 16:00
MW04	R208158-25	Water	08/22/12 12:30	08/23/12 16:00
MW03	R208158-26	Water	08/22/12 12:25	08/23/12 16:00
MW08	R208158-27	Water	08/22/12 12:50	08/23/12 16:00

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*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*





LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess

Project Number: 0345-12007  
Project Manager: John Cocroft

**Reported:**  
09/04/12 11:02

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW16	R208158-28	Water	08/22/12 13:30	08/23/12 16:00
MW15	R208158-29	Water	08/22/12 13:25	08/23/12 16:00
Trip Blank	R208158-30	Water	08/22/12 00:00	08/23/12 16:00

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess

Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

- R208/58.1

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741 Corporate Circle Suite 1 • Golden, Colorado 80401  
303-277-5930 • 303-374-5933 Fax

Page 1 of 3

Client: LTE  
Address: 4600 West 60th Avenue  
City/State/Zip: Arvada CO 80003  
Phone: 303-433-9788 Fax: 303-433-1432  
Sampler Name: Phillip Hamlin  
Project Manager: J Cocroft  
E-Mail: jcocroft@ltenv.com  
Project Name: Walden Water Flood Facility/Praxair Assessment  
Project Number: 0345-12007

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix				Analyze For:				Special Instructions		
				HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	DR/ORO	GBTEX	PH / EC / SAR	910 metals		TCLP As	BTEX
SB01@0.5'	8/21/2012	1055	1															
SB02@1'	8/21/2012	1118	1															
SB03@10.5'	8/21/2012	1135	1															
SB04@0.5'	8/21/2012	1225	1															
SB05@0.5'	8/21/2012	1510	1															
SB06@14'	8/21/2012	1448	1															
SB07@12'	8/21/2012	1422	1															
SB08@9'	8/21/2012	1353	1															
SB09@10.5'	8/21/2012	1340	1															
SB10@12'	8/22/2012	800	1															

Relinquished by: <i>[Signature]</i>	Date/Time: 8/21/12	Received by: <i>[Signature]</i>	Date/Time: 8/23/12	Turn Around Time (Check): Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: 51 Inact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

www.SummitScientific.com

*[Signature]*

LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess

Project Number: 0345-12007  
Project Manager: John Cocroft

**Reported:**  
09/04/12 11:02

R208/58.2

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303-277-9310 • 303-374-5933 Fax

Page 2 of 3

Client: LTE

Address:	4600 west 60th Avenue	Project Manager:	J Corroff
City/State/Zip:	Arvada CO 80003	E-Mail:	jcorroff@new.com
Phone:	303 433 9788	Project Name:	Walden Water Flood Facility/Prairie Assessment
Sample Name:	Phillips Hamlin	Project Number:	0545 12007

Sample Description	Date Sampled	Time Number of Containers Sampled	Preservative	Matrix	Analyze For:	Special Instructions
SB112011	8/22/2012	820	None	Air - Canister Serial #	Other (Specify)	
SB1209.5	8/22/2012	852	None	Groundwater	Other (Specify)	
SB1309.5	8/22/2012	920	None	Soil	Other (Specify)	
SB1408.5	8/22/2012	955	None	Groundwater	Other (Specify)	
SB1508	8/22/2012	1017	None	Soil	Other (Specify)	
SB1608.5	8/22/2012	1035	None	Groundwater	Other (Specify)	
MW02	8/22/2012	1220	X	Soil	Other (Specify)	
MW09	8/22/2012	1255	X	Groundwater	Other (Specify)	
MW07	8/22/2012	1245	X	Soil	Other (Specify)	
MW11	8/22/2012	1305	X	Groundwater	Other (Specify)	
Requested by:	Date Time:	Received by:	Date Time:	Turn Around Time (Check)	Notes:	
W/p 8/22/12		W/p 8/22/12		Same Day		
				24 Hours		
				48 Hours		
Requested by:	Date Time:	Received by:	Date Time:	Sample Integrity:	Temperature Upon Receipt:	
				Intact:	Yes	No

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*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Regel IV







LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

**Reported:**  
09/04/12 11:02

**SB01@9.5'**  
**R208158-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/21/12 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (TEPH-DRO)</b>	<b>64</b>	50	mg/kg	1	2082708	08/27/12	08/28/12	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/21/12 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		127 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/21/12 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.039</b>	0.0050	mg/kg	1	2082707	08/28/12	08/29/12	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.15</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>1.5</b>	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>52</b>	0.50	"	"	"	"	"	"	

Date Sampled: **08/21/12 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		94.7 %	30-150		"	"	"	"	
Surrogate: Toluene-d8		107 %	30-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.8 %	30-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**SB02@11'**  
**R208158-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/21/12 11:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (TEPH-DRO)</b>	<b>120</b>	50	mg/kg	1	2082708	08/27/12	08/28/12	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/21/12 11:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		132 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/21/12 11:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.76</b>	0.0050	mg/kg	1	2082707	08/28/12	08/29/12	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.72</b>	0.50	"	100	"	"	"	"	
<b>Xylenes (total)</b>	<b>6.2</b>	0.50	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>360</b>	50	"	"	"	"	"	"	

Date Sampled: **08/21/12 11:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		91.7 %	30-150		"	"	"	"	
Surrogate: Toluene-d8		96.4 %	30-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.2 %	30-150		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**SB03@10.5'**  
**R208158-03 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/21/12 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (TEPH-DRO)</b>	<b>88</b>	50	mg/kg	1	2082708	08/27/12	08/29/12	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/21/12 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		119 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/21/12 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.17</b>	0.0050	mg/kg	1	2082707	08/28/12	08/29/12	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.80</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>3.5</b>	0.50	"	100	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>220</b>	50	"	"	"	"	"	"	

Date Sampled: **08/21/12 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		92.1 %	30-150		"	"	"	"	
Surrogate: Toluene-d8		95.5 %	30-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.6 %	30-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess

Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**SB04@9.5'**  
**R208158-04 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/21/12 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (TEPH-DRO)</b>	<b>60</b>	50	mg/kg	1	2082708	08/27/12	08/29/12	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/21/12 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		138 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/21/12 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	2082707	08/28/12	08/29/12	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.20</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.36</b>	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>41</b>	0.50	"	"	"	"	"	"	

Date Sampled: **08/21/12 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		92.6 %	30-150		"	"	"	"	
Surrogate: Toluene-d8		98.3 %	30-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.1 %	30-150		"	"	"	"	

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Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**SB05@9.5'**  
**R208158-05 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/21/12 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	2082708	08/27/12	08/29/12	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/21/12 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		129 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/21/12 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	2082707	08/28/12	08/29/12	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/21/12 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	30-150		"	"	"	"	
Surrogate: Toluene-d8		99.7 %	30-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.8 %	30-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**SB06@14'**  
**R208158-06 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/21/12 14:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	2082708	08/27/12	08/29/12	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/21/12 14:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		127 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/21/12 14:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.026</b>	0.0050	mg/kg	1	2082707	08/28/12	08/29/12	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.038</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.15</b>	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>5.8</b>	0.50	"	"	"	"	"	"	

Date Sampled: **08/21/12 14:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		117 %	30-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	30-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.3 %	30-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**SB07@12'**  
**R208158-07 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/21/12 14:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	2082708	08/27/12	08/29/12	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/21/12 14:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		125 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/21/12 14:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	2082707	08/28/12	08/29/12	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/21/12 14:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	30-150		"	"	"	"	
Surrogate: Toluene-d8		98.7 %	30-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.4 %	30-150		"	"	"	"	

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4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**SB08@9'**  
**R208158-08 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/21/12 13:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	670	50	mg/kg	1	2082708	08/27/12	08/29/12	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/21/12 13:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		117 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/21/12 13:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.56	0.50	mg/kg	100	2082707	08/28/12	08/29/12	EPA 8260B	
Toluene	3.7	0.50	"	"	"	"	"	"	
Ethylbenzene	1.1	0.50	"	"	"	"	"	"	
Xylenes (total)	11	0.50	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	480	50	"	"	"	"	"	"	

Date Sampled: **08/21/12 13:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		87.6 %	30-150		"	"	"	"	
Surrogate: Toluene-d8		96.7 %	30-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.1 %	30-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess

Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**SB09@10.5'**  
**R208158-09 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/21/12 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (TEPH-DRO)</b>	<b>230</b>	50	mg/kg	1	2082708	08/27/12	08/29/12	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/21/12 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		128 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/21/12 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>1.2</b>	0.50	mg/kg	100	2082707	08/28/12	08/29/12	EPA 8260B	
<b>Toluene</b>	<b>11</b>	0.50	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>3.8</b>	0.50	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>52</b>	0.50	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>1700</b>	50	"	"	"	"	"	"	

Date Sampled: **08/21/12 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.0 %	30-150		"	"	"	"	
Surrogate: Toluene-d8		81.2 %	30-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		65.2 %	30-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess

Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**SB10@12'**  
**R208158-10 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/12 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	2082708	08/27/12	08/29/12	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/12 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		127 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	2082707	08/28/12	08/29/12	EPA 8260B	
<b>Toluene</b>	<b>0.0057</b>	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.015</b>	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>1.4</b>	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/12 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		96.4 %	30-150		"	"	"	"	
Surrogate: Toluene-d8		97.6 %	30-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.5 %	30-150		"	"	"	"	

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4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**SB11@11'**  
**R208158-11 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/12 08:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	66	50	mg/kg	1	2082708	08/27/12	08/29/12	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/12 08:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		130 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 08:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	2082707	08/28/12	08/29/12	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/12 08:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.1 %	30-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	30-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.6 %	30-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**SB12@9.5'**  
**R208158-12 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/12 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	2082708	08/27/12	08/29/12	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/12 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		126 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	2082707	08/28/12	08/29/12	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/12 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.5 %	30-150		"	"	"	"	
Surrogate: Toluene-d8		99.1 %	30-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.1 %	30-150		"	"	"	"	

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Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**SB13@9.5'**  
**R208158-13 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/12 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	66	50	mg/kg	1	2082708	08/27/12	08/29/12	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/12 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		124 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	2082707	08/28/12	08/29/12	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/12 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		100 %	30-150		"	"	"	"	
Surrogate: Toluene-d8		98.5 %	30-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.9 %	30-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**SB14@8.5'**  
**R208158-14 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/12 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	54	50	mg/kg	1	2082708	08/27/12	08/29/12	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/12 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		119 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	2082707	08/28/12	08/29/12	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/12 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		84.6 %	30-150		"	"	"	"	
Surrogate: Toluene-d8		95.4 %	30-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.3 %	30-150		"	"	"	"	

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4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**SB15@9'**  
**R208158-15 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/12 10:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	2082708	08/27/12	08/29/12	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/12 10:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		127 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 10:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	2082707	08/28/12	08/29/12	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/12 10:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.2 %	30-150		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	30-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.4 %	30-150		"	"	"	"	

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4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**SB16@8.5'**  
**R208158-16 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/12 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	2082708	08/27/12	08/29/12	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/12 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		123 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	2082707	08/28/12	08/29/12	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/12 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.0 %	30-150		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	30-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.2 %	30-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**MW02**  
**R208158-17 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>2100</b>	100		ug/l	100	2082913	08/29/12	08/30/12	EPA 8260B	
<b>Toluene</b>	<b>1.7</b>	1.0		"	1	"	"	"	"	
<b>Ethylbenzene</b>	<b>670</b>	100		"	100	"	"	"	"	
<b>Xylenes (total)</b>	<b>5400</b>	100		"	"	"	"	"	"	

Date Sampled: **08/22/12 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		107 %		49.7-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		99.6 %		51-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		101 %		50.1-150		"	"	"	"	

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4600 West 60th Avenue  
Arvada CO, 80003

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Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**MW09**  
**R208158-18 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>1400</b>	100		ug/l	100	2082913	08/29/12	08/30/12	EPA 8260B	
<b>Toluene</b>	<b>1700</b>	100		"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>200</b>	100		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>1700</b>	100		"	"	"	"	"	"	

Date Sampled: **08/22/12 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		84.0 %		49.7-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		130 %		51-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		102 %		50.1-150		"	"	"	"	

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Arvada CO, 80003

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Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**MW07**  
**R208158-19 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 12:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>1.5</b>	1.0		ug/l	1	2082913	08/29/12	08/30/12	EPA 8260B	
<b>Toluene</b>	<b>1.2</b>	1.0		"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>4.6</b>	1.0		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>33</b>	1.0		"	"	"	"	"	"	

Date Sampled: **08/22/12 12:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		91.0 %		49.7-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		101 %		51-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		98.8 %		50.1-150		"	"	"	"	

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Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**MW11**  
**R208158-20 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2082913	08/29/12	08/30/12	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	1.0		"	"	"	"	"	"	

Date Sampled: **08/22/12 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		103 %		49.7-150		"	"	"	"	
Surrogate: Toluene-d8		99.5 %		51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		50.1-150		"	"	"	"	

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4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**MW06**  
**R208158-21 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 12:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>1200</b>	100		ug/l	100	2082913	08/29/12	08/30/12	EPA 8260B	
<b>Toluene</b>	<b>4.9</b>	1.0		"	1	"	"	"	"	
<b>Ethylbenzene</b>	<b>300</b>	100		"	100	"	"	"	"	
<b>Xylenes (total)</b>	<b>1200</b>	100		"	"	"	"	"	"	

Date Sampled: **08/22/12 12:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %		49.7-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		130 %		51-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97.1 %		50.1-150		"	"	"	"	

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4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**MW10**  
**R208158-22 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>100</b>	1.0	ug/l	1	2082913	08/29/12	08/30/12	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>3.5</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>14</b>	1.0	"	"	"	"	"	"	

Date Sampled: **08/22/12 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	49.7-150		"	"	"	"	
Surrogate: Toluene-d8		97.5 %	51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	50.1-150		"	"	"	"	

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4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**MW05**  
**R208158-23 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 12:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	2082913	08/29/12	08/30/12	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>2.2</b>	1.0	"	"	"	"	"	"	

Date Sampled: **08/22/12 12:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		101 %	49.7-150		"	"	"	"	
Surrogate: Toluene-d8		98.5 %	51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	50.1-150		"	"	"	"	

Summit Scientific

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Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**MW01**  
**R208158-24 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 12:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Benzene</b>	<b>810</b>	100	ug/l	100	2082913	08/29/12	08/30/12	EPA 8260B	
<b>Toluene</b>	<b>1.3</b>	1.0	"	1	"	"	"	"	
<b>Ethylbenzene</b>	<b>400</b>	100	"	100	"	"	"	"	
<b>Xylenes (total)</b>	<b>840</b>	1.0	"	1	"	"	"	"	

Date Sampled: **08/22/12 12:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<i>Surrogate: 1,2-Dichloroethane-d4</i>		108 %	49.7-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.8 %	51-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		103 %	50.1-150		"	"	"	"	

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Arvada CO, 80003

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Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**MW04**  
**R208158-25 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>6.6</b>	1.0		ug/l	1	2082913	08/29/12	08/30/12	EPA 8260B	
<b>Toluene</b>	<b>7.9</b>	1.0		"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>200</b>	1.0		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>410</b>	1.0		"	"	"	"	"	"	

Date Sampled: **08/22/12 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		93.2 %		49.7-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		142 %		51-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		104 %		50.1-150		"	"	"	"	

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Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**MW03**  
**R208158-26 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 12:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>560</b>	100		ug/l	100	2082913	08/29/12	08/30/12	EPA 8260B	
<b>Toluene</b>	<b>100</b>	1.0		"	1	"	"	"	"	
<b>Ethylbenzene</b>	<b>480</b>	100		"	100	"	"	"	"	
<b>Xylenes (total)</b>	<b>2500</b>	100		"	"	"	"	"	"	

Date Sampled: **08/22/12 12:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		83.4 %		49.7-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		144 %		51-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		100 %		50.1-150		"	"	"	"	

Summit Scientific

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Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**MW08**  
**R208158-27 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>7000</b>	100		ug/l	100	2082913	08/29/12	08/30/12	EPA 8260B	
<b>Toluene</b>	<b>13000</b>	100		"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>830</b>	100		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>7800</b>	100		"	"	"	"	"	"	

Date Sampled: **08/22/12 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %		49.7-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		100 %		51-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		100 %		50.1-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**MW16**  
**R208158-28 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	2082913	08/29/12	08/30/12	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **08/22/12 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		104 %	49.7-150		"	"	"	"	
Surrogate: Toluene-d8		99.6 %	51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	50.1-150		"	"	"	"	

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Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**MW15**  
**R208158-29 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>4.7</b>	1.0		ug/l	1	2082913	08/29/12	08/30/12	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	1.0		"	"	"	"	"	"	

Date Sampled: **08/22/12 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		105 %		49.7-150		"	"	"	"	
Surrogate: Toluene-d8		101 %		51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.8 %		50.1-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**Trip Blank**  
**R208158-30 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/22/12 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	2082913	08/29/12	08/30/12	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **08/22/12 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		100 %	49.7-150		"	"	"	"	
Surrogate: Toluene-d8		100 %	51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	50.1-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

**Batch 2082708 - EPA 3550A**

**Blank (2082708-BLK1)**

Prepared: 08/27/12 Analyzed: 08/29/12

C10-C28 (TEPH-DRO)	ND	50	mg/kg
C28-C36 (TEPH-ORO)	ND	50	"

**Blank (2082708-BLK2)**

Prepared: 08/27/12 Analyzed: 08/29/12

C10-C28 (TEPH-DRO)	ND	50	mg/kg
C28-C36 (TEPH-ORO)	ND	50	"

**LCS (2082708-BS1)**

Prepared: 08/27/12 Analyzed: 08/29/12

C10-C28 (TEPH-DRO)	458	50	mg/kg	501	91.4	77-133
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**LCS (2082708-BS2)**

Prepared: 08/27/12 Analyzed: 08/29/12

C10-C28 (TEPH-DRO)	425	50	mg/kg	501	84.9	77-133
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**LCS Dup (2082708-BSD1)**

Prepared: 08/27/12 Analyzed: 08/29/12

C10-C28 (TEPH-DRO)	460	50	mg/kg	501	91.7	77-133	0.363	11
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**LCS Dup (2082708-BSD2)**

Prepared: 08/27/12 Analyzed: 08/29/12

C10-C28 (TEPH-DRO)	444	50	mg/kg	501	88.5	77-133	4.22	11
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**Matrix Spike (2082708-MS1)**

Source: R208158-01

Prepared: 08/27/12 Analyzed: 08/29/12

C10-C28 (TEPH-DRO)	481	50	mg/kg	500	64.3	83.4	68-141
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**Matrix Spike (2082708-MS2)**

Source: R208166-02

Prepared: 08/27/12 Analyzed: 08/29/12

C10-C28 (TEPH-DRO)	444	50	mg/kg	497	51.0	79.1	68-141
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**Matrix Spike Dup (2082708-MSD1)**

Source: R208158-01

Prepared: 08/27/12 Analyzed: 08/29/12

C10-C28 (TEPH-DRO)	432	50	mg/kg	483	64.3	76.2	68-141	10.8	23
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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess

Project Number: 0345-12007  
Project Manager: John Cocroft

**Reported:**  
09/04/12 11:02

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

**Batch 2082708 - EPA 3550A**

**Matrix Spike Dup (2082708-MSD2)**

**Source: R208166-02**

Prepared: 08/27/12 Analyzed: 08/29/12

C10-C28 (TEPH-DRO)	434	50	mg/kg	489	51.0	78.3	68-141	2.32	23
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4600 West 60th Avenue  
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Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

**Batch 2082707 - EPA 5030 Soil MS**

**Blank (2082707-BLK1)**

Prepared & Analyzed: 08/28/12

Benzene	ND	0.0050	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0397		"	0.0397		100	30-150			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.5	30-150			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0400		96.7	30-150			

**Blank (2082707-BLK2)**

Prepared & Analyzed: 08/28/12

Benzene	ND	0.0050	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0388		"	0.0397		97.9	30-150			
Surrogate: Toluene-d8	0.0391		"	0.0400		97.6	30-150			
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0400		95.8	30-150			

**LCS (2082707-BS1)**

Prepared & Analyzed: 08/28/12

Benzene	0.0543	0.0050	mg/kg	0.0500		109	58-126			
Toluene	0.0559	0.0050	"	0.0500		112	60-132			
Ethylbenzene	0.0591	0.0050	"	0.0500		118	74-138			
m,p-Xylene	0.118	0.010	"	0.100		118	72-135			
o-Xylene	0.0569	0.0050	"	0.0500		114	73-139			
Surrogate: 1,2-Dichloroethane-d4	0.0399		"	0.0397		101	30-150			
Surrogate: Toluene-d8	0.0390		"	0.0400		97.5	30-150			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.5	30-150			

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Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

**Batch 2082707 - EPA 5030 Soil MS**

**LCS (2082707-BS2)**

Prepared & Analyzed: 08/28/12

Benzene	0.0544	0.0050	mg/kg	0.0500		109	58-126			
Toluene	0.0558	0.0050	"	0.0500		112	60-132			
Ethylbenzene	0.0593	0.0050	"	0.0500		119	74-138			
m,p-Xylene	0.118	0.010	"	0.100		118	72-135			
o-Xylene	0.0574	0.0050	"	0.0500		115	73-139			
Surrogate: 1,2-Dichloroethane-d4	0.0386		"	0.0397		97.3	30-150			
Surrogate: Toluene-d8	0.0390		"	0.0400		97.4	30-150			
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400		99.8	30-150			

**LCS Dup (2082707-BSD1)**

Prepared & Analyzed: 08/28/12

Benzene	0.0538	0.0050	mg/kg	0.0500		108	58-126	0.999	13	
Toluene	0.0543	0.0050	"	0.0500		109	60-132	2.89	14	
Ethylbenzene	0.0580	0.0050	"	0.0500		116	74-138	2.00	13	
m,p-Xylene	0.117	0.010	"	0.100		117	72-135	0.714	14	
o-Xylene	0.0558	0.0050	"	0.0500		112	73-139	1.92	13	
Surrogate: 1,2-Dichloroethane-d4	0.0408		"	0.0397		103	30-150			
Surrogate: Toluene-d8	0.0395		"	0.0400		98.8	30-150			
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		102	30-150			

**LCS Dup (2082707-BSD2)**

Prepared & Analyzed: 08/28/12

Benzene	0.0508	0.0050	mg/kg	0.0500		102	58-126	6.78	13	
Toluene	0.0519	0.0050	"	0.0500		104	60-132	7.30	14	
Ethylbenzene	0.0538	0.0050	"	0.0500		108	74-138	9.66	13	
m,p-Xylene	0.109	0.010	"	0.100		109	72-135	8.25	14	
o-Xylene	0.0537	0.0050	"	0.0500		107	73-139	6.64	13	
Surrogate: 1,2-Dichloroethane-d4	0.0416		"	0.0397		105	30-150			
Surrogate: Toluene-d8	0.0396		"	0.0400		99.0	30-150			
Surrogate: 4-Bromofluorobenzene	0.0392		"	0.0400		98.0	30-150			

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Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

**Batch 2082707 - EPA 5030 Soil MS**

Matrix Spike (2082707-MS1)		Source: R208166-01			Prepared & Analyzed: 08/28/12					
Benzene	0.0514	0.0050	mg/kg	0.0494	ND	104	33-127			
Toluene	0.0521	0.0050	"	0.0494	ND	105	32-131			
Ethylbenzene	0.0553	0.0050	"	0.0494	ND	112	24-153			
m,p-Xylene	0.111	0.010	"	0.0988	ND	112	12-157			
o-Xylene	0.0540	0.0050	"	0.0494	ND	109	35-149			
Surrogate: 1,2-Dichloroethane-d4	0.0389		"	0.0392		99.1	30-150			
Surrogate: Toluene-d8	0.0390		"	0.0395		98.6	30-150			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0395		98.5	30-150			

Matrix Spike (2082707-MS2)		Source: R208167-01			Prepared & Analyzed: 08/28/12					
Benzene	0.0486	0.0050	mg/kg	0.0478	ND	102	33-127			
Toluene	0.0488	0.0050	"	0.0478	ND	102	32-131			
Ethylbenzene	0.0517	0.0050	"	0.0478	ND	108	24-153			
m,p-Xylene	0.104	0.010	"	0.0956	ND	109	12-157			
o-Xylene	0.0503	0.0050	"	0.0478	ND	105	35-149			
Surrogate: 1,2-Dichloroethane-d4	0.0376		"	0.0380		99.1	30-150			
Surrogate: Toluene-d8	0.0374		"	0.0382		97.9	30-150			
Surrogate: 4-Bromofluorobenzene	0.0379		"	0.0382		99.2	30-150			

Matrix Spike Dup (2082707-MSD1)		Source: R208166-01			Prepared & Analyzed: 08/28/12					
Benzene	0.0489	0.0050	mg/kg	0.0488	ND	100	33-127	4.88	33	
Toluene	0.0501	0.0050	"	0.0488	ND	103	32-131	3.77	31	
Ethylbenzene	0.0540	0.0050	"	0.0488	ND	111	24-153	2.53	23	
m,p-Xylene	0.107	0.010	"	0.0977	ND	109	12-157	3.51	67	
o-Xylene	0.0522	0.0050	"	0.0488	ND	107	35-149	3.40	38	
Surrogate: 1,2-Dichloroethane-d4	0.0396		"	0.0388		102	30-150			
Surrogate: Toluene-d8	0.0379		"	0.0391		97.1	30-150			
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0391		98.3	30-150			

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Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

**Batch 2082707 - EPA 5030 Soil MS**

Matrix Spike Dup (2082707-MSD2)				Source: R208167-01		Prepared & Analyzed: 08/28/12				
Benzene	0.0499	0.0050	mg/kg	0.0499	ND	100	33-127	2.63	33	
Toluene	0.0501	0.0050	"	0.0499	ND	100	32-131	2.58	31	
Ethylbenzene	0.0534	0.0050	"	0.0499	ND	107	24-153	3.24	23	
m,p-Xylene	0.106	0.010	"	0.0998	ND	106	12-157	1.50	67	
o-Xylene	0.0517	0.0050	"	0.0499	ND	104	35-149	2.75	38	
Surrogate: 1,2-Dichloroethane-d4	0.0399		"	0.0396		101	30-150			
Surrogate: Toluene-d8	0.0389		"	0.0399		97.5	30-150			
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0399		99.5	30-150			

**Batch 2082913 - EPA 5030 Water MS**

Blank (2082913-BLK1)				Prepared & Analyzed: 08/29/12						
Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.4		"	13.2		101	49.7-150			
Surrogate: Toluene-d8	13.2		"	13.3		98.7	51-150			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		98.9	50.1-150			
Blank (2082913-BLK2)				Prepared: 08/29/12 Analyzed: 08/30/12						
Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.7		"	13.2		104	49.7-150			
Surrogate: Toluene-d8	13.2		"	13.3		99.2	51-150			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		101	50.1-150			

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

**Batch 2082913 - EPA 5030 Water MS**

**LCS (2082913-BS1)**

Prepared: 08/29/12 Analyzed: 08/30/12

Benzene	15.2	1.0	ug/l	16.7		91.2	50-125			
Toluene	15.4	1.0	"	16.7		92.6	51-130			
Ethylbenzene	17.0	1.0	"	16.7		102	56-141			
m,p-Xylene	32.2	2.0	"	33.3		96.5	56-138			
o-Xylene	15.8	1.0	"	16.7		95.0	51-142			
Surrogate: 1,2-Dichloroethane-d4	13.4		"	13.2		101	49.7-150			
Surrogate: Toluene-d8	13.2		"	13.3		98.6	51-150			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.2	50.1-150			

**LCS Dup (2082913-BSD1)**

Prepared: 08/29/12 Analyzed: 08/30/12

Benzene	17.6	1.0	ug/l	16.7		106	50-125	14.6	14.6	
Toluene	17.8	1.0	"	16.7		107	51-130	14.1	18.9	
Ethylbenzene	19.5	1.0	"	16.7		117	56-141	13.9	11.9	
m,p-Xylene	37.1	2.0	"	33.3		111	56-138	14.3	13.7	
o-Xylene	18.0	1.0	"	16.7		108	51-142	13.0	15	
Surrogate: 1,2-Dichloroethane-d4	13.1		"	13.2		98.8	49.7-150			
Surrogate: Toluene-d8	13.1		"	13.3		98.0	51-150			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.5	50.1-150			

**Matrix Spike (2082913-MS1)**

Source: R208169-06

Prepared: 08/29/12 Analyzed: 08/30/12

Benzene	19.0	1.0	ug/l	16.7	ND	114	41-127			
Toluene	18.6	1.0	"	16.7	ND	112	32-140			
Ethylbenzene	19.9	1.0	"	16.7	ND	119	32-151			
m,p-Xylene	37.8	2.0	"	33.3	ND	114	29-153			
o-Xylene	18.6	1.0	"	16.7	ND	112	34-152			
Surrogate: 1,2-Dichloroethane-d4	13.5		"	13.2		102	49.7-150			
Surrogate: Toluene-d8	13.1		"	13.3		98.1	51-150			
Surrogate: 4-Bromofluorobenzene	13.5		"	13.3		101	50.1-150			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
09/04/12 11:02

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

**Batch 2082913 - EPA 5030 Water MS**

Matrix Spike (2082913-MS2)		Source: R208169-07			Prepared: 08/29/12		Analyzed: 08/30/12			
Benzene	15.6	1.0	ug/l	16.7	ND	93.4	41-127			
Toluene	15.4	1.0	"	16.7	ND	92.2	32-140			
Ethylbenzene	16.6	1.0	"	16.7	ND	99.4	32-151			
m,p-Xylene	31.6	2.0	"	33.3	ND	94.9	29-153			
o-Xylene	15.4	1.0	"	16.7	ND	92.3	34-152			
Surrogate: 1,2-Dichloroethane-d4	13.1		"	13.2		99.3	49.7-150			
Surrogate: Toluene-d8	13.2		"	13.3		99.1	51-150			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		99.0	50.1-150			

Matrix Spike Dup (2082913-MSD1)		Source: R208169-06			Prepared: 08/29/12		Analyzed: 08/30/12				QM-07
Benzene	23.4	1.0	ug/l	16.7	ND	140	41-127	20.6	21.3		
Toluene	23.1	1.0	"	16.7	ND	139	32-140	21.8	15.5		
Ethylbenzene	24.7	1.0	"	16.7	ND	148	32-151	21.4	17.4		
m,p-Xylene	47.0	2.0	"	33.3	ND	141	29-153	21.5	18.1		
o-Xylene	23.2	1.0	"	16.7	ND	140	34-152	22.1	15		
Surrogate: 1,2-Dichloroethane-d4	13.2		"	13.2		100	49.7-150				
Surrogate: Toluene-d8	13.2		"	13.3		99.2	51-150				
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		100	50.1-150				

Matrix Spike Dup (2082913-MSD2)		Source: R208169-07			Prepared: 08/29/12		Analyzed: 08/30/12				QM-07
Benzene	23.4	1.0	ug/l	16.7	ND	141	41-127	40.5	21.3		
Toluene	23.0	1.0	"	16.7	ND	138	32-140	39.9	15.5		
Ethylbenzene	24.9	1.0	"	16.7	ND	149	32-151	40.0	17.4		
m,p-Xylene	47.3	2.0	"	33.3	ND	142	29-153	39.7	18.1		
o-Xylene	23.5	1.0	"	16.7	ND	141	34-152	41.7	15		
Surrogate: 1,2-Dichloroethane-d4	14.0		"	13.2		105	49.7-150				
Surrogate: Toluene-d8	13.1		"	13.3		98.0	51-150				
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.7	50.1-150				

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Walden Water Flood Facility/Praxair Assess

Project Number: 0345-12007  
Project Manager: John Cocroft

**Reported:**  
09/04/12 11:02

### Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 15, 2012

Aimee Cole  
LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada, CO 80003  
RE: BC - Praxair Assessment

Enclosed are the results of analyses for samples received by Summit Scientific on 11/08/12 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Paul Shrewsbury', is written over a light gray circular background.

Paul Shrewsbury For Ben Shrewsbury  
President / Laboratory Manager





LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment

Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW01	R211057-01	Water	11/07/12 12:20	11/08/12 16:00
MW02	R211057-02	Water	11/07/12 12:30	11/08/12 16:00
MW04	R211057-03	Water	11/07/12 12:40	11/08/12 16:00
MW05	R211057-04	Water	11/07/12 12:45	11/08/12 16:00
MW06	R211057-05	Water	11/07/12 12:50	11/08/12 16:00
MW07	R211057-06	Water	11/07/12 12:55	11/08/12 16:00
MW09	R211057-07	Water	11/07/12 13:05	11/08/12 16:00
MW10	R211057-08	Water	11/07/12 13:10	11/08/12 16:00
MW13	R211057-09	Water	11/07/12 13:25	11/08/12 16:00
MW14	R211057-10	Water	11/07/12 13:30	11/08/12 16:00
MW15	R211057-11	Water	11/07/12 13:35	11/08/12 16:00
MW16	R211057-12	Water	11/07/12 13:40	11/08/12 16:00
MW12	R211057-13	Water	11/07/12 13:20	11/08/12 16:00
MW11	R211057-14	Water	11/07/12 13:15	11/08/12 16:00

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment

Project Number: 0345-12007

Project Manager: Aimee Cole

**Reported:**

11/15/12 15:57

R211057.1

## Summit Scientific

741 Corporate Circle Suite 1 • Golden, Colorado 80401  
303-277-9310 • 303-374-5933 Fax

Page 1 of 2

LTE

Client:

Address: 4600 West 60th Avenue

City/State/Zip:  Avenida CO 80003

Phone: 303.433.9788 Fax: 303.4

Sample Name: Phillip Hamlin

**Project Manager:** Aimee Cole

E-Mail: [acola@lternv.com](mailto:acola@lternv.com)

Project Name:

District Number

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix		Analyze For:	Special Instructions
				HCl	HNO <sub>3</sub>	Other (Specify)	Groundwater	Soil	Air - Container Serial #		
MW01	11/7/2012	12:10	3k	X			X				
MW02	11/7/2012	12:10	3k	X			X				
MW03	11/7/2012	12:15	3k	X			X				Not Sampled
MW04	11/7/2012	12:40	3k	X			X				
MW05	11/7/2012	12:45	3k	X			X				
MW06	11/7/2012	12:50	3k	X			X				
MW07	11/7/2012	12:53	3k	X			X				
MW08	11/7/2012	13:00	3k	X			X				Not Sampled
MW09	11/7/2012	13:05	3k	X			X				
MW10	11/7/2012	13:10	3k	X			X				

Relinquished by: <i>[Signature]</i>	Date Time: <i>11/8/12</i>	Rec'd by: <i>[Signature]</i>	Turn Around Time (Check):	Notes:
			<input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard X	
Relinquished by: <i>[Signature]</i>	Date Time: <i>11/8/12</i>	Rec'd by: <i>[Signature]</i>	<input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard X	

Relinquished by: _____	Date Time: _____	Received in Lab by: _____	Date Time: _____
Relinquished by: _____	Date Time: _____	Received in Lab by: _____	Date Time: _____

Sample Integrity: _____	Temperature Upon Receipt: _____	Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No
		53

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment

Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

R211057

## Summit Scientific

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Page 2 of 2

Client \_\_\_\_\_ LFE \_\_\_\_\_

West 60th Avenue

Project Manager: Aimee Cole

Aimee Cole

da CO 80003

E-Mail: [acole@itenv.com](mailto:acole@itenv.com)

acole@itrv.com

303 433 1432

Project Name: \_\_\_\_\_  
Praxis Assessment \_\_\_\_\_

Praxair Assessment/Walden Water Flood Facility

Philip Hamlin

Project Number:

0345-1207

[illegible]

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment  
Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

**MW01**  
**R211057-01 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 11/07/12 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>810</b>	100	ug/l	100	2111002	11/10/12	11/10/12	EPA 8260B	
Toluene	ND	1.0	"	1	"	"	"	"	
<b>Ethylbenzene</b>	<b>160</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>910</b>	100	"	100	"	"	"	"	

Date Sampled: 11/07/12 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		91.7 %	49.7-150		"	"	"	"	
Surrogate: Toluene-d8		134 %	51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.6 %	50.1-150		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment  
Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

**MW02**  
**R211057-02 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 11/07/12 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>2400</b>	100	ug/l	100	2111002	11/10/12	11/11/12	EPA 8260B	
Toluene	ND	1.0	"	1	"	"	"	"	
<b>Ethylbenzene</b>	<b>700</b>	100	"	100	"	"	"	"	
<b>Xylenes (total)</b>	<b>5400</b>	100	"	"	"	"	"	"	

Date Sampled: 11/07/12 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		71.0 %	49.7-150		"	"	"	"	
Surrogate: Toluene-d8		136 %	51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		84.8 %	50.1-150		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment  
Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

**MW04**  
**R211057-03 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 11/07/12 12:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>2.5</b>	1.0	ug/l	1	2111002	11/10/12	11/11/12	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>62</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>60</b>	1.0	"	"	"	"	"	"	

Date Sampled: 11/07/12 12:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		83.5 %	49.7-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	50.1-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment  
Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

**MW05**  
**R211057-04 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 11/07/12 12:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	2111002	11/10/12	11/11/12	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 11/07/12 12:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		84.9 %	49.7-150		"	"	"	"	
Surrogate: Toluene-d8		98.5 %	51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	50.1-150		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment

Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

**MW06**  
**R211057-05 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 11/07/12 12:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>9.8</b>	1.0	ug/l	1	2111002	11/10/12	11/11/12	EPA 8260B	
<b>Toluene</b>	<b>1.6</b>	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>200</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>540</b>	1.0	"	"	"	"	"	"	

Date Sampled: 11/07/12 12:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		74.2 %	49.7-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		120 %	51-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		92.0 %	50.1-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment  
Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

**MW07**  
**R211057-06 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 11/07/12 12:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>2.0</b>	1.0	ug/l	1	2111002	11/10/12	11/11/12	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>1.2</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>8.7</b>	1.0	"	"	"	"	"	"	

Date Sampled: 11/07/12 12:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		87.7 %	49.7-150		"	"	"	"	
Surrogate: Toluene-d8		100 %	51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.5 %	50.1-150		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment  
Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

**MW09**  
**R211057-07 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 11/07/12 13:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>4100</b>	100	ug/l	100	2111002	11/10/12	11/11/12	EPA 8260B	
<b>Toluene</b>	<b>4600</b>	100	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>430</b>	100	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>3500</b>	100	"	"	"	"	"	"	

Date Sampled: 11/07/12 13:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		88.1 %	49.7-150		"	"	"	"	
Surrogate: Toluene-d8		95.6 %	51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.3 %	50.1-150		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment

Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

**MW10**  
**R211057-08 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 11/07/12 13:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>120</b>	1.0	ug/l	1	2111002	11/10/12	11/11/12	EPA 8260B	
<b>Toluene</b>	<b>5.2</b>	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>5.1</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>30</b>	1.0	"	"	"	"	"	"	

Date Sampled: 11/07/12 13:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97.9 %	49.7-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		100 %	51-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		98.0 %	50.1-150		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment

Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

**MW13**  
**R211057-09 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 11/07/12 13:25

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2111002	11/10/12	11/11/12	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	1.0		"	"	"	"	"	"	

Date Sampled: 11/07/12 13:25

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		86.6 %		49.7-150		"	"	"	"	
Surrogate: Toluene-d8		97.7 %		51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.2 %		50.1-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment  
Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

**MW14**  
**R211057-10 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 11/07/12 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>1.1</b>	1.0	ug/l	1	2111002	11/10/12	11/11/12	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 11/07/12 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		83.4 %	49.7-150		"	"	"	"	
Surrogate: Toluene-d8		97.0 %	51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.2 %	50.1-150		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment  
Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

**MW15**  
**R211057-11 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 11/07/12 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>16</b>	1.0	ug/l	1	2111002	11/10/12	11/11/12	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 11/07/12 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		89.6 %	49.7-150		"	"	"	"	
Surrogate: Toluene-d8		96.5 %	51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.1 %	50.1-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment  
Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

**MW16**  
**R211057-12 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 11/07/12 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>2.9</b>	1.0	ug/l	1	2111002	11/10/12	11/11/12	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 11/07/12 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		90.6 %	49.7-150		"	"	"	"	
Surrogate: Toluene-d8		96.8 %	51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.8 %	50.1-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment  
Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

**MW12**  
**R211057-13 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 11/07/12 13:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	2111002	11/10/12	11/11/12	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 11/07/12 13:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		87.5 %	49.7-150		"	"	"	"	
Surrogate: Toluene-d8		96.5 %	51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.8 %	50.1-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment  
Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

**MW11**  
**R211057-14 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 11/07/12 13:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	2111002	11/10/12	11/11/12	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 11/07/12 13:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		85.1 %	49.7-150		"	"	"	"	
Surrogate: Toluene-d8		98.3 %	51-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	50.1-150		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment  
Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### Batch 2111002 - EPA 5030 Water MS

##### Blank (2111002-BLK1)

Prepared: 11/10/12 Analyzed: 11/12/12

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	10.6		"	13.2		80.4	49.7-150			
Surrogate: Toluene-d8	12.9		"	13.3		96.5	51-150			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		98.8	50.1-150			

##### LCS (2111002-BS1)

Prepared: 11/10/12 Analyzed: 11/12/12

Benzene	24.8	1.0	ug/l	33.3		74.5	51-132			
Toluene	27.0	1.0	"	33.3		80.9	51-138			
Ethylbenzene	30.1	1.0	"	33.3		90.2	58-146			
m,p-Xylene	63.7	2.0	"	66.7		95.5	57-144			
o-Xylene	30.1	1.0	"	33.3		90.2	53-146			
Surrogate: 1,2-Dichloroethane-d4	10.5		"	13.2		79.3	49.7-150			
Surrogate: Toluene-d8	12.8		"	13.3		96.2	51-150			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.7	50.1-150			

##### LCS Dup (2111002-BSD1)

Prepared: 11/10/12 Analyzed: 11/12/12

Benzene	23.5	1.0	ug/l	33.3		70.4	51-132	5.63	17	
Toluene	25.7	1.0	"	33.3		77.0	51-138	4.90	17	
Ethylbenzene	28.9	1.0	"	33.3		86.8	58-146	3.86	16	
m,p-Xylene	60.8	2.0	"	66.7		91.2	57-144	4.60	16	
o-Xylene	28.7	1.0	"	33.3		86.1	53-146	4.66	15	
Surrogate: 1,2-Dichloroethane-d4	10.4		"	13.2		78.7	49.7-150			
Surrogate: Toluene-d8	13.1		"	13.3		98.0	51-150			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.3	50.1-150			

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment  
Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

**Batch 2111002 - EPA 5030 Water MS**

Matrix Spike (2111002-MS1)				Source: R211057-10		Prepared: 11/10/12		Analyzed: 11/12/12		
Benzene	28.3	1.0	ug/l	33.3	1.07	81.8	34-141			
Toluene	30.7	1.0	"	33.3	ND	92.2	27-151			
Ethylbenzene	34.4	1.0	"	33.3	ND	103	29-160			
m,p-Xylene	72.3	2.0	"	66.7	ND	108	20-166			
o-Xylene	34.7	1.0	"	33.3	ND	104	33-159			
Surrogate: 1,2-Dichloroethane-d4	10.6		"	13.2		79.7	49.7-150			
Surrogate: Toluene-d8	12.8		"	13.3		96.2	51-150			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.3	50.1-150			
Matrix Spike Dup (2111002-MSD1)				Source: R211057-10		Prepared: 11/10/12		Analyzed: 11/12/12		
Benzene	27.8	1.0	ug/l	33.3	1.07	80.3	34-141	1.75	32	
Toluene	29.7	1.0	"	33.3	ND	89.0	27-151	3.54	25	
Ethylbenzene	32.5	1.0	"	33.3	ND	97.5	29-160	5.65	50	
m,p-Xylene	67.9	2.0	"	66.7	ND	102	20-166	6.25	36	
o-Xylene	32.2	1.0	"	33.3	ND	96.8	33-159	7.43	26	
Surrogate: 1,2-Dichloroethane-d4	10.8		"	13.2		82.0	49.7-150			
Surrogate: Toluene-d8	13.0		"	13.3		97.3	51-150			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.8	50.1-150			

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Praxair Assessment

Project Number: 0345-12007  
Project Manager: Aimee Cole

**Reported:**  
11/15/12 15:57

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference

---

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A handwritten signature in black ink, appearing to be 'MSM'.

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 14, 2013

John Cocroft

LT Environmental, Inc.

4600 West 60th Avenue

Arvada, CO 80003

RE: BC - Bonanza Creek Water Flood Facility

Enclosed are the results of analyses for samples received by Summit Scientific on 03/04/13 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Joseph J Egry IV

Laboratory Director

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Bonanza Creek Water Flood Facility

Project Number: 0345-12007  
Project Manager: John Cocroft

**Reported:**  
03/14/13 14:19

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW01	R303022-01	Water	02/28/13 11:15	03/04/13 16:00
MW02	R303022-02	Water	02/28/13 11:25	03/04/13 16:00
MW11	R303022-03	Water	02/28/13 12:20	03/04/13 16:00
MW04	R303022-04	Water	02/28/13 11:05	03/04/13 16:00
MW05	R303022-05	Water	02/28/13 11:35	03/04/13 16:00
MW06	R303022-06	Water	02/28/13 11:45	03/04/13 16:00
MW07	R303022-07	Water	02/28/13 11:50	03/04/13 16:00
MW12	R303022-08	Water	02/28/13 12:30	03/04/13 16:00
MW09	R303022-09	Water	02/28/13 12:00	03/04/13 16:00
MW10	R303022-10	Water	02/28/13 12:10	03/04/13 16:00
MW13	R303022-11	Water	02/28/13 12:40	03/04/13 16:00
MW14	R303022-12	Water	02/28/13 12:50	03/04/13 16:00
MW15	R303022-13	Water	02/28/13 13:00	03/04/13 16:00
MW16	R303022-14	Water	02/28/13 13:10	03/04/13 16:00

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Bonanza Creek Water Flood Facility

Project Number: 0345-12007  
Project Manager: John Cocroft

**Reported:**  
03/14/13 14:19

R303022.1

Summit Scientific

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303-277-9310 • 303-374-5933 Fax

Page 1 of 2

Client: LTE

Address: 4600 West 60th Avenue

Project Manager. J Cocroft

City/State/Zip: Arvada CO 80003

E-Mail: [info@altium.com](mailto:info@altium.com)E-Mail: [info@altium.com](mailto:info@altium.com)

Phone: 303 433 9788 Fax: 303

**Project Name:** Bonanza Creek Water Flood Facility

Sampler Name: Phillip Hamlin

Project Number: 0345 12007

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix				Analyze For:										Special Instructions
				HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	DRO/ORO	GBTEX	PH / EC / SAR	910 metals	TCLP As	Total As	Total Ba	BTEX			
MW01	2/28/2013	1115	3X	X														X				
MW02	2/28/2013	1125	3X		X													X				
MW11	2/28/2013	1220	3X		X													X				
MW04	2/28/2013	1105	3X		X													X				
MW05	2/28/2013	1135	2X		X													X				
MW06	2/28/2013	1145	3X		X													X				
MW07	2/28/2013	1150	3X		X													X				
MW12	2/28/2013	1230	3X		X													X				
MW09	2/28/2013	1200	3X		X													X				
MW10	2/28/2013	1210	3X		X													X				
Relinquished by: <i>[Signature]</i>	Date Time: <i>2:00:12</i>	Received by: <i>[Signature]</i> Date Time: <i>3/4/13</i> <i>1600</i>				Turn Around Time (Check) Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> X 48 Hours <input type="checkbox"/>				Notes:												
Relinquished by: <i>[Signature]</i>	Date Time:	Received by: <i>[Signature]</i> Date Time: <i>1</i>				Sample Integrity: Temperature Upon Receipt: <input type="checkbox"/> Intact <input checked="" type="checkbox"/> No <input type="checkbox"/>																
Relinquished by:	Date Time:	Received in Lab by: <i>[Signature]</i> Date Time:																				

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Regel IV

LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Bonanza Creek Water Flood Facility

Project Number: 0345-12007  
Project Manager: John Cocroft

**Reported:**  
03/14/13 14:19

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Page 2 of 2

Client	LTE
Address	4600 west 60th Avenue
City/State/Zip	Arvada CO 80003
Phone	303 433 9788
Fax	303 433 1432
Sample Name	Phillips Hamlin
Project Name	Bonanza Creek Water Flood Facility
Project Number	0946 12007
Project Manager	J Coorntj
E-Mail	jcoorntj@litem.com

Preservative			Matrix		Analyze For:		Special Instructions	
Sample Description	Date Sampled	Time Sampled	Number of Containers	HCl HNO <sub>3</sub> None Other (Specify)	Soil Groundwater Other (Specify)	Air - Canister Serial #	Other (Specify)	DRO/ORO GBTEX PH / EC / SAR TCLP As Total As Total Ba BTEX
MW13	2/28/2013	12:40	3X					X
MW14	2/28/2013	12:50	3X					X
MW15	2/28/2013	13:00	3X					X
MW16	2/28/2013	13:10	3X					X
Requested by: <i>MA</i>			Date/Time: <i>2/28/13 11:58</i>	Received by: <i>[Signature]</i>		Date/Time: <i>3/4/13 1600</i>	Turn Around Time (Check) Same Day <input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/>	
Requested by: <i>[Signature]</i>			Date/Time:	Received by: <i>1</i>		Date/Time:	Sample Integrity: Temperature Upon Receipt <input type="checkbox"/> Intact <input checked="" type="checkbox"/>	
Requested by:			Date/Time:	Received in Lab by:		Date/Time:	Notes	

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Regel IV





LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Bonanza Creek Water Flood Facility  
Project Number: 0345-12007  
Project Manager: John Cocroft

**Reported:**  
03/14/13 14:19

**MW01**  
**R303022-01 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/28/13 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>790</b>	10		ug/l	10	3030804	03/08/13	03/12/13	EPA 8260B	
Toluene	ND	1.0		"	1	"	"	"	"	
<b>Ethylbenzene</b>	<b>210</b>	1.0		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>570</b>	10		"	10	"	"	"	"	

Date Sampled: **02/28/13 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		94.8 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		141 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.5 %		45-146		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Bonanza Creek Water Flood Facility  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
03/14/13 14:19

**MW02**  
**R303022-02 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/28/13 11:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>3200</b>	100	ug/l	100	3030804	03/08/13	03/12/13	EPA 8260B	
Toluene	ND	1.0	"	1	"	"	03/12/13	"	
<b>Ethylbenzene</b>	<b>740</b>	100	"	100	"	"	03/12/13	"	
<b>Xylenes (total)</b>	<b>4300</b>	100	"	"	"	"	"	"	

Date Sampled: 02/28/13 11:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		94.8 %	37-154		"	"	03/12/13	"	
Surrogate: Toluene-d8		93.2 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.1 %	45-146		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Bonanza Creek Water Flood Facility  
Project Number: 0345-12007  
Project Manager: John Cocroft

**Reported:**  
03/14/13 14:19

**MW11**  
**R303022-03 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/28/13 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>10</b>	1.0	ug/l	1	3030804	03/08/13	03/12/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>2.8</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>16</b>	1.0	"	"	"	"	"	"	

Date Sampled: **02/28/13 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		94.7 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.0 %	45-146		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Bonanza Creek Water Flood Facility  
Project Number: 0345-12007  
Project Manager: John Cocroft

**Reported:**  
03/14/13 14:19

**MW04**  
**R303022-04 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/28/13 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>4.1</b>	1.0	ug/l	1	3030804	03/08/13	03/12/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>66</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>58</b>	1.0	"	"	"	"	"	"	

Date Sampled: **02/28/13 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.4 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		93.9 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	45-146		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Bonanza Creek Water Flood Facility  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
03/14/13 14:19

**MW05**  
**R303022-05 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/28/13 11:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	3030804	03/08/13	03/12/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 02/28/13 11:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.6 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		95.3 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.6 %	45-146		"	"	"	"	

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Arvada CO, 80003

Project: BC - Bonanza Creek Water Flood Facility  
Project Number: 0345-12007  
Project Manager: John Cocroft

**Reported:**  
03/14/13 14:19

**MW06**  
**R303022-06 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/28/13 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>1100</b>	10	ug/l	10	3030804	03/08/13	03/13/13	EPA 8260B	
<b>Toluene</b>	<b>1.2</b>	1.0	"	1	"	"	"	"	
<b>Ethylbenzene</b>	<b>170</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>360</b>	1.0	"	"	"	"	"	"	

Date Sampled: **02/28/13 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		100 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		92.9 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		108 %	45-146		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Bonanza Creek Water Flood Facility  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
03/14/13 14:19

**MW07**  
**R303022-07 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 02/28/13 11:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>2.3</b>	1.0	ug/l	1	3030804	03/08/13	03/13/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 02/28/13 11:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		93.8 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	45-146		"	"	"	"	

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Arvada CO, 80003

Project: BC - Bonanza Creek Water Flood Facility  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
03/14/13 14:19

**MW12**  
**R303022-08 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/28/13 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	3030804	03/08/13	03/13/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/28/13 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.8 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		94.7 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.8 %	45-146		"	"	"	"	

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Project Number: 0345-12007  
Project Manager: John Cocroft

**Reported:**  
03/14/13 14:19

**MW09**  
**R303022-09 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/28/13 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>7200</b>	100	ug/l	100	3030804	03/08/13	03/13/13	EPA 8260B	
<b>Toluene</b>	<b>6700</b>	100	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>680</b>	100	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>5100</b>	100	"	"	"	"	"	"	

Date Sampled: **02/28/13 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		64.5 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		93.7 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		109 %	45-146		"	"	"	"	

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Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
03/14/13 14:19

**MW10**  
**R303022-10 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/28/13 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>120</b>	1.0	ug/l	1	3030804	03/08/13	03/13/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>2.0</b>	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/28/13 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		95.8 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		94.1 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.1 %	45-146		"	"	"	"	

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Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
03/14/13 14:19

**MW13**  
**R303022-11 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/28/13 12:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	3030804	03/08/13	03/13/13	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	1.0		"	"	"	"	"	"	

Date Sampled: **02/28/13 12:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		101 %		37-154		"	"	"	"	
Surrogate: Toluene-d8		94.5 %		45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.6 %		45-146		"	"	"	"	

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Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
03/14/13 14:19

**MW14**  
**R303022-12 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/28/13 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	3030804	03/08/13	03/13/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/28/13 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		94.5 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		94.7 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.8 %	45-146		"	"	"	"	

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Arvada CO, 80003

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Project Number: 0345-12007  
Project Manager: John Cocroft

**Reported:**  
03/14/13 14:19

**MW15**  
**R303022-13 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/28/13 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>19</b>	1.0	ug/l	1	3030804	03/08/13	03/13/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/28/13 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		95.7 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		92.6 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.2 %	45-146		"	"	"	"	

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Arvada CO, 80003

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Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
03/14/13 14:19

**MW16**  
**R303022-14 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/28/13 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>2.6</b>	1.0	ug/l	1	3030804	03/08/13	03/13/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/28/13 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.3 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		95.6 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.4 %	45-146		"	"	"	"	

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Arvada CO, 80003

Project: BC - Bonanza Creek Water Flood Facility  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
03/14/13 14:19

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

**Batch 3030804 - EPA 5030 Water MS**

**Blank (3030804-BLK1)**

Prepared: 03/08/13 Analyzed: 03/12/13

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	16.2		"	13.2		123	37-154			
Surrogate: Toluene-d8	13.8		"	13.3		104	45-149			
Surrogate: 4-Bromofluorobenzene	14.2		"	13.3		106	45-146			

**LCS (3030804-BS1)**

Prepared: 03/08/13 Analyzed: 03/12/13

Benzene	35.8	1.0	ug/l	33.3		107	51-132			
Toluene	38.0	1.0	"	33.3		114	51-138			
Ethylbenzene	45.1	1.0	"	33.3		135	58-146			
m,p-Xylene	88.0	2.0	"	66.7		132	57-144			
o-Xylene	43.4	1.0	"	33.3		130	53-146			
Surrogate: 1,2-Dichloroethane-d4	14.5		"	13.2		110	37-154			
Surrogate: Toluene-d8	13.7		"	13.3		103	45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		101	45-146			

**LCS Dup (3030804-BSD1)**

Prepared: 03/08/13 Analyzed: 03/12/13

Benzene	37.0	1.0	ug/l	33.3		111	51-132	3.33	17	
Toluene	40.1	1.0	"	33.3		120	51-138	5.37	17	
Ethylbenzene	45.6	1.0	"	33.3		137	58-146	1.13	16	
m,p-Xylene	89.6	2.0	"	66.7		134	57-144	1.87	16	
o-Xylene	43.6	1.0	"	33.3		131	53-146	0.529	15	
Surrogate: 1,2-Dichloroethane-d4	14.5		"	13.2		110	37-154			
Surrogate: Toluene-d8	13.8		"	13.3		104	45-149			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.6	45-146			

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Arvada CO, 80003

Project: BC - Bonanza Creek Water Flood Facility  
Project Number: 0345-12007  
Project Manager: John Cocroft

Reported:  
03/14/13 14:19

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

**Batch 3030804 - EPA 5030 Water MS**

Matrix Spike (3030804-MS1)				Source: R303022-01		Prepared: 03/08/13		Analyzed: 03/12/13		
Benzene	780	1.0	ug/l	33.3	793	NR	34-141			S-02
Toluene	39.8	1.0	"	33.3	ND	119	27-151			
Ethylbenzene	233	1.0	"	33.3	207	76.7	29-160			
m,p-Xylene	623	2.0	"	66.7	547	114	20-166			S-02
o-Xylene	63.0	1.0	"	33.3	20.6	127	33-159			
Surrogate: 1,2-Dichloroethane-d4	12.2		"	13.2		92.5	37-154			
Surrogate: Toluene-d8	19.1		"	13.3		143	45-149			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		100	45-146			

Matrix Spike Dup (3030804-MSD1)				Source: R303022-01		Prepared: 03/08/13		Analyzed: 03/12/13		
Benzene	771	1.0	ug/l	33.3	793	NR	34-141	1.19	32	S-02
Toluene	38.8	1.0	"	33.3	ND	116	27-151	2.70	25	
Ethylbenzene	234	1.0	"	33.3	207	80.8	29-160	0.574	50	
m,p-Xylene	630	2.0	"	66.7	547	124	20-166	1.04	36	S-02
o-Xylene	63.2	1.0	"	33.3	20.6	128	33-159	0.317	26	
Surrogate: 1,2-Dichloroethane-d4	11.4		"	13.2		86.5	37-154			
Surrogate: Toluene-d8	18.0		"	13.3		135	45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	45-146			

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4600 West 60th Avenue  
Arvada CO, 80003

Project: BC - Bonanza Creek Water Flood Facility

Project Number: 0345-12007  
Project Manager: John Cocroft

**Reported:**  
03/14/13 14:19

### Notes and Definitions

S-02      The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

DET      Analyte DETECTED

ND      Analyte NOT DETECTED at or above the reporting limit

NR      Not Reported

dry      Sample results reported on a dry weight basis

RPD      Relative Percent Difference

A handwritten signature in black ink, appearing to read 'Angel A. Reyes IV'.