

State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303) 894-2100 Fax 894-2109



FOR OGCC USE ONLY

**SITE INVESTIGATION AND REMEDIATION WORKPLAN**

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

**CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED**

☒ Spill or Release ☐ Plug & Abandon ☐ Central Facility Closure ☐ Site/Facility Closure ☐ Other (describe): \_\_\_\_\_

OGCC Employee:

☐ Spill ☐ Complaint  
☐ Inspection ☐ NOAV

Tracking No:

**GENERAL INFORMATION**

<b>OGCC Operator Number:</b> 10071 <b>Name of Operator:</b> Bill Barrett Corporation <b>Address:</b> 112 Red Feather Trail <b>City:</b> Silt <b>State:</b> CO <b>Zip:</b> 81652		<b>Contact Name and Telephone</b> <b>Name:</b> Scott Ghan <b>No:</b> 970-876-1959 <b>Fax:</b> 970-876-0981	
<b>API/Facility No:</b> 05-045-18660 <b>Facility Name:</b> Miller 10 <b>Well Name:</b> Miller Federal <b>Location (Qtr, Sec, Twp, Rng, Meridian):</b> NWSE 6 7S 91W 6 PM		<b>County:</b> Garfield <b>Facility Number:</b> <b>Well Number:</b> 24D-31-691 <b>Latitude:</b> 39.476889 <b>Longitude:</b> -107.595036	

**TECHNICAL CONDITIONS**

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): _____		Condensate/Produced Water	
<b>Site Conditions:</b> Is location within a sensitive area (according to Rule 901e)? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If yes, attach evaluation. (Potential Shallow Groundwater)		Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): _____	
Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: _____		Rangeland	
Potential receptors (water wells within 1/4 mi, surface waters, etc.): _____		Potts Loam, 6 to 12 percent slopes	
Potential receptors (water wells within 1/4 mi, surface waters, etc.): An intermittent stream is located 1,500 feet (ft.) east; a water well is located 2,205 ft. northwest; groundwater is estimated to be 114 ft. below ground surface (bgs) (water well permit number 167281-A)			
<b>Description of Impact</b> (if previously provided, refer to that form or document):			
Impacted Media (check): <input checked="" type="checkbox"/> Soils <input type="checkbox"/> Vegetation <input type="checkbox"/> Groundwater <input type="checkbox"/> Surface water	Extent of Impact: 70' NE-SE x 20' NE to SW	How Determined: Laboratory analysis and field screening of soil samples	

**REMEDIALTION WORKPLAN**

Describe initial action taken (if previously provided, refer to that form or document):  Form 19 submitted on 5/2/2011 (Spill Number 2597006 ).
Describe how source is to be removed:  A contractor setting deadmen at the facility punctured a 6-inch diameter condensate/produced water line. Condensate/produced water was subsequently discovered once it had risen to the pad surface. Following removal of condensate/produced water from the pad surface by a vacuum truck, Bill Barrett Corporation (BBC) contractors delineated the extent of soil impact via excavation. Based on field data provided to the COGCC, Linda Spry O'Rourke verbally approved a reduced list of analytes for confirmation sampling on 4/21/11. Two soil samples (B01-10' and B02-10') collected from the base of the excavation and were submitted to a contract laboratory for analysis of Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 metals, electrical conductivity (EC), pH, sodium adsorption ratio (SAR), benzene, toluene, ethylbenzene, and total xylenes (BTEX), total petroleum hydrocarbons-gasoline range organics (TPH-GRO), TPH-diesel range organics (TPH-DRO), and polycyclic aromatic hydrocarbons (PAHs). A third soil sample from the base and eight additional samples were collected from the sidewalls of the excavation and were submitted for analysis of EC, BTEX, TPH-GRO, and TPH-DRO. A topographic site location map and site map are provided as Figures 1 and 2. The laboratory analytical reports are provided in Table 1 and laboratory reports are provided as an attachment.
Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:  Approximately 396 cubic yards (cy) of impacted soil excavated from the spill area is currently being landfarmed within a lined containment onsite.

State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado  
(303) 894-2100 Fax 894-2109



Tracking Number:	_____
Name of Operator:	<u>Bill Barrett Corporation</u>
OGCC Operator No:	<u>10071</u>
Received Date:	_____
Well Name & No:	<u>Miller Federal 24D-31-691</u>
Facility Name & No.:	<u>Miller 10</u>

**REMEDIATION WORKPLAN (CONT.)**

OGCC Employee: \_\_\_\_\_

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

Groundwater was not encountered during excavation activities. Based on a nearby water well (permit number 167281-A), groundwater is estimated to be 114 ft. bgs.

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

The excavation was backfilled with clean fill material to match the existing grade of the pad.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? ☒ Y ☐ N If yes, describe:

Soil samples B01-10' and B02-10' were collected adjacent to the release location and submitted for a full Table 910-1 analyte list to establish source concentrations. Analytical results for soil samples B01-10' and B02-10' indicated COGCC Table 910-1 metals, EC, BTEX, TPH-GRO, TPH-DRO, PAHs, and SAR are in compliance with COGCC Table 910-1 concentration levels.

Since source concentrations of Table 910-1 analytes were in compliance with COGCC standards, the third soil sample from the base and eight sidewall samples were submitted for analysis of EC, BTEX, TPH-GRO, and TPH-DRO. Analytical results for the nine remaining soil samples indicated EC, BTEX, TPH-GRO, and TPH-DRO are in compliance with Table 910-1 concentration levels.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

Approximately 396 cy of impacted soil excavated from the spill area is currently being landfarmed within a lined containment onsite. The soil will remain within the containment until it has been demonstrated that COGCC Table 910-1 analytes are in compliance. At that time a Form 27 will be submitted with a No Further Action request.

**IMPLEMENTATION SCHEDULE**

Date Site Investigation Began:	<u>4/19/11</u>	Date Site Investigation Completed:	<u>4/20/11</u>	Remediation Plan Submitted:	<u>5/20/11</u>
Remediation Start Date:	<u>4/19/11</u>	Anticipated Completion Date:	<u>NA</u>	Actual Completion Date:	<u>4/20/11</u>

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Scott Ghan

Signed: \_\_\_\_\_ Title: E H & S Coordinator Date: 5/20/11

OGCC Approved: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_



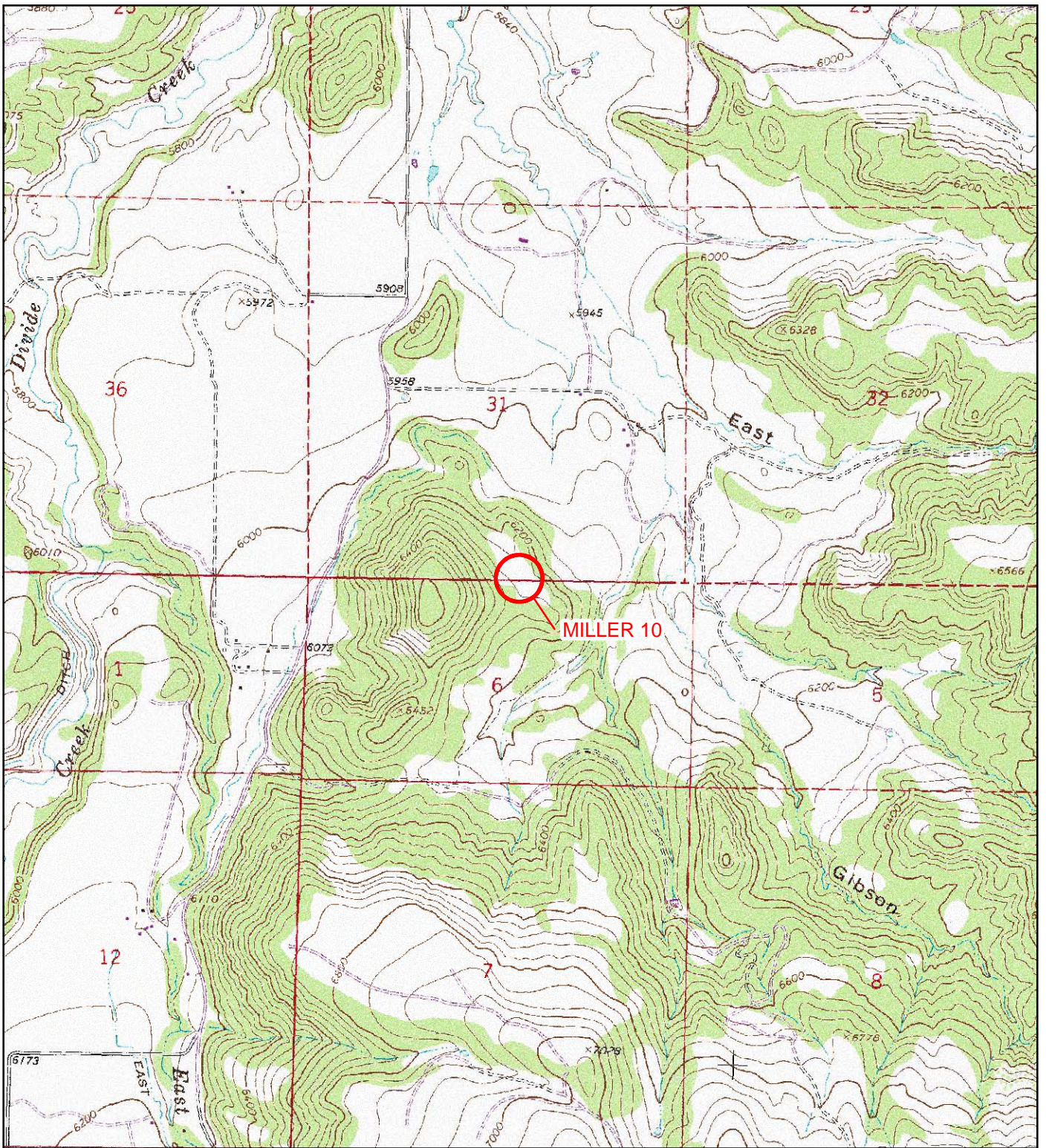


IMAGE COURTESY OF USDA/NRCS, VARIOUS DATES

# LEGEND

○ SITE LOCATION

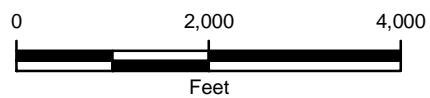
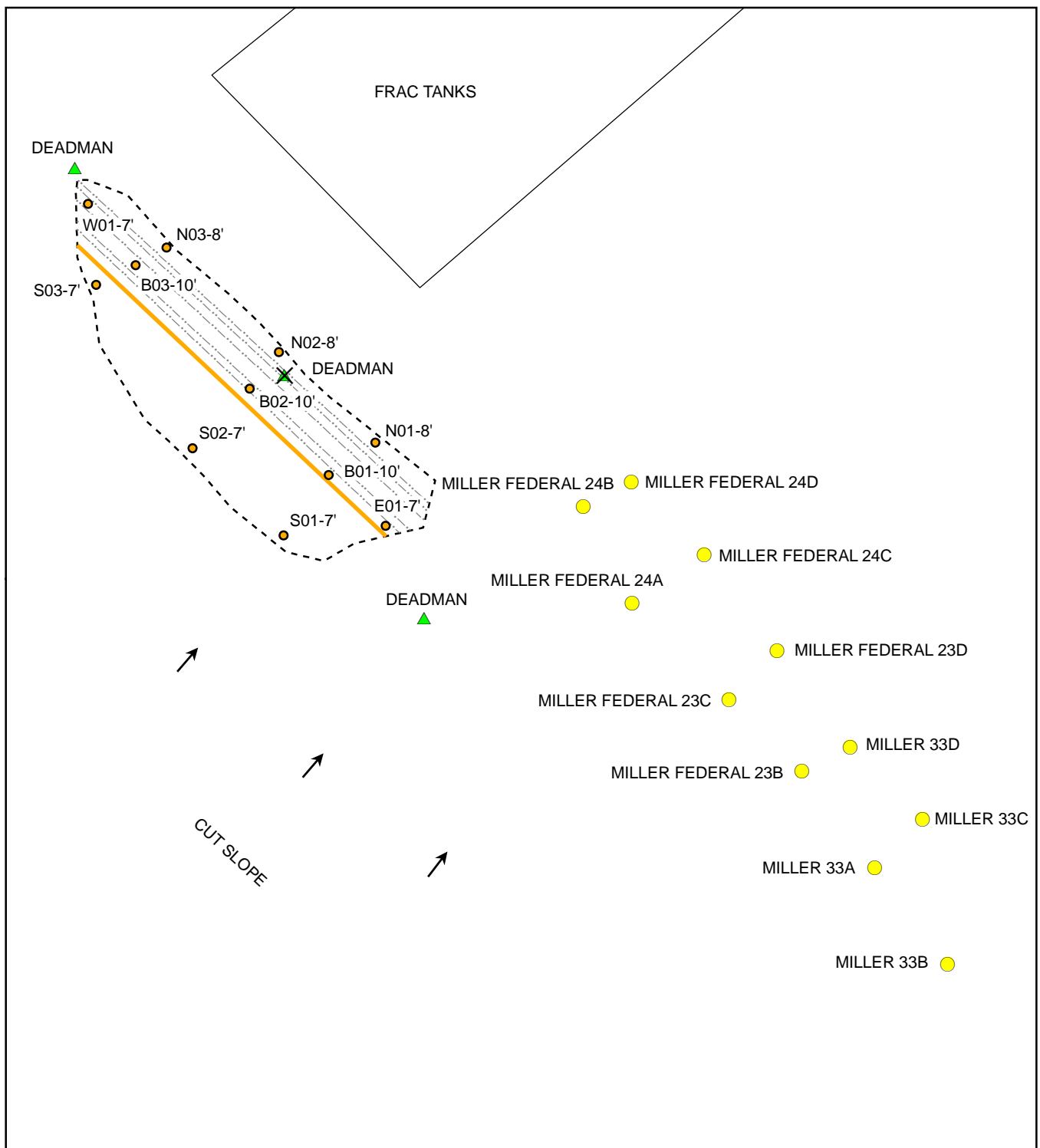


FIGURE 1  
SITE LOCATION MAP  
MILLER 10  
NWSE SEC 31 TS 91W  
GARFIELD COUNTY, COLORADO  
BILL BARRETT CORPORATION

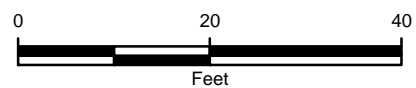






# **LEGEND**

- SOIL SAMPLE
- ▲ DEADMAN
- ✕ RELEASE LOCATION
- WELL HEAD
- COMMUNICATION LINE
- - - DUMP LINE
- - - EXCAVATION EXTENT



**FIGURE 2**  
**SITE MAP**  
**MILLER 10**  
 NWSE SEC 31 7S 91W  
 GARFIELD COUNTY, COLORADO  
**BILL BARRETT CORPORATION**



**TABLE 1**  
**SOIL ANALYTICAL RESULTS**  
**MILLER 10 RELEASE**  
**GARFIELD COUNTY, COLORADO**  
**BILL BARRETT CORPORATION**

Parameter	Standard	B01	B02	B03	E01
Depth (feet)		10	10	10	7
Sample Date		4/20/2011	4/20/2011	4/20/2011	4/20/2011

**Inorganics**

Electrical Conductivity (mmhos/cm)	4	0.711	0.432	0.839	0.362
SAR (units)	12	8.1	4.5		
pH, Lab (pH Units)	6 to 9	8.5	8.6		

**Metals**

Arsenic (mg/kg)	0.39	<0.05	<0.05		
Barium (mg/kg)	15000	194.2	210.1		
Cadmium (mg/kg)	70	0.2	0.2		
Chromium (mg/kg)		13	12.6		
Chromium+3 Calculated (mg/kg)	120000	12.4	12		
Chromium, Hexavalent (mg/kg)	23	0.63	0.62		
Copper (mg/kg)	3100	13.7	12.5		
Lead (mg/kg)	400	11.5	11.3		
Mercury (mg/kg)	23	<0.05	<0.05		
Nickel (mg/kg)	1600	15.2	15.3		
Selenium (mg/kg)	390	0.68	0.23		
Silver (mg/kg)	390	<0.1	<0.1		
Zinc (mg/kg)	23000	45.24	43.34		

**Organic Compounds**

TPH-DRO (mg/kg)		<50	<50	130	<50
TPH-GRO (mg/kg)		<0.50	<0.50	9.0	<0.50
Benzene (mg/kg)	0.17	<0.0050	<0.0050	0.010	<0.0050
Toluene (mg/kg)	85	<0.0050	<0.0050	0.38	<0.0050
Ethylbenzene (mg/kg)	100	<0.0050	<0.0050	0.081	<0.0050
Xylenes, Total (mg/kg)	175	<0.0050	<0.0050	0.99	0.0096
Acenaphthene (mg/kg)	1000	<0.005	<0.005		
Anthracene (mg/kg)	1000	<0.005	<0.005		
Benzo (a) anthracene (mg/kg)	0.22	<0.005	<0.005		
Benzo (b) fluoranthene (mg/kg)	0.22	<0.005	<0.005		
Benzo (k) fluoranthene (mg/kg)	2.2	<0.005	<0.005		
Benzo (a) pyrene (mg/kg)	0.022	<0.005	<0.005		
Chrysene (mg/kg)	22	<0.005	<0.005		
Dibenz (a,h) anthracene (mg/kg)	0.022	<0.01	<0.01		
Fluoranthene (mg/kg)	1000	<0.005	<0.005		
Fluorene (mg/kg)	1000	<0.005	<0.005		
Indeno (1,2,3-cd) pyrene (mg/kg)	0.22	<0.01	<0.01		
Naphthalene (mg/kg)	23	<0.005	<0.005		
Pyrene (mg/kg)	1000	<0.005	<0.005		



**TABLE 1**  
**SOIL ANALYTICAL RESULTS**  
**MILLER 10 RELEASE**  
**GARFIELD COUNTY, COLORADO**  
**BILL BARRETT CORPORATION**

Parameter	Standard	B01	B02	B03	E01
Depth (feet)		10	10	10	7
Sample Date		4/20/2011	4/20/2011	4/20/2011	4/20/2011

**Notes:**

< - less than stated laboratory reporting limit

Bold numbers indicate result equalled or exceeded standard.

Basic Standards for Soil are taken from 2 CCR 404-1, Table 910-1, effective April 2009.

GRO - Gasoline Range Organics

TPH-Total - sum of TPH-GRO and TPH-DRO

mg/kg - milligrams per kilogram

mmhos/cm - millimhos per centimeter

TPH - Total Petroleum Hydrocarbons (C6-C28)

DRO - Diesel Range Organics

SAR - Sodium Adsorption Ratio



**TABLE 1 (Continued)**  
**SOIL ANALYTICAL RESULTS**  
**MILLER 10 RELEASE**  
**GARFIELD COUNTY, COLORADO**  
**BILL BARRETT CORPORATION**

Parameter	Standard	N01	N02	N03	S01
Depth (feet)		8	8	8	7
Sample Date		4/20/2011	4/20/2011	4/20/2011	4/20/2011

**Inorganics**

Electrical Conductivity (mmhos/cm)	4	0.928	0.737	0.692	0.822
SAR (units)	12				
pH, Lab (pH Units)	6 to 9				

**Metals**

Arsenic (mg/kg)	0.39
Barium (mg/kg)	15000
Cadmium (mg/kg)	70
Chromium (mg/kg)	
Chromium+3 Calculated (mg/kg)	120000
Chromium, Hexavalent (mg/kg)	23
Copper (mg/kg)	3100
Lead (mg/kg)	400
Mercury (mg/kg)	23
Nickel (mg/kg)	1600
Selenium (mg/kg)	390
Silver (mg/kg)	390
Zinc (mg/kg)	23000

**Organic Compounds**

TPH-DRO (mg/kg)		<50	<50	<50	<50
TPH-GRO (mg/kg)		<0.50	<0.50	<0.50	<0.50
Benzene (mg/kg)	0.17	<0.0050	<0.0050	<0.0050	<0.0050
Toluene (mg/kg)	85	<0.0050	<0.0050	<0.0050	<0.0050
Ethylbenzene (mg/kg)	100	<0.0050	<0.0050	<0.0050	<0.0050
Xylenes, Total (mg/kg)	175	<0.0050	<0.0050	<0.0050	0.0071
Acenaphthene (mg/kg)	1000				
Anthracene (mg/kg)	1000				
Benzo (a) anthracene (mg/kg)	0.22				
Benzo (b) fluoranthene (mg/kg)	0.22				
Benzo (k) fluoranthene (mg/kg)	2.2				
Benzo (a) pyrene (mg/kg)	0.022				
Chrysene (mg/kg)	22				
Dibenz (a,h) anthracene (mg/kg)	0.022				
Fluoranthene (mg/kg)	1000				
Fluorene (mg/kg)	1000				
Indeno (1,2,3-cd) pyrene (mg/kg)	0.22				
Naphthalene (mg/kg)	23				
Pyrene (mg/kg)	1000				



**TABLE 1 (Continued)**  
**SOIL ANALYTICAL RESULTS**  
**MILLER 10 RELEASE**  
**GARFIELD COUNTY, COLORADO**  
**BILL BARRETT CORPORATION**

Parameter	Standard	N01	N02	N03	S01
Depth (feet)		8	8	8	7
Sample Date		4/20/2011	4/20/2011	4/20/2011	4/20/2011

**Notes:**

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Basic Standards for Soil are taken from 2 CCR 404-1, Table 910-1, effective April 2009.

GRO - Gasoline Range Organics

TPH-Total - sum of TPH-GRO and TPH-DRO

mg/kg - milligrams per kilogram

mmhos/cm - millimhos per centimeter

TPH - Total Petroleum Hydrocarbons (C6-C28)

DRO - Diesel Range Organics

SAR - Sodium Adsorption Ratio





**TABLE 1 (Continued)**  
**SOIL ANALYTICAL RESULTS**  
**MILLER 10 RELEASE**  
**GARFIELD COUNTY, COLORADO**  
**BILL BARRETT CORPORATION**

Parameter	Standard	S02	S03	W01
Depth (feet)		7	7	7
Sample Date		4/20/2011	4/20/2011	4/20/2011

**Inorganics**

Electrical Conductivity (mmhos/cm)	4	0.604	0.636	1.57
SAR (units)	12			
pH, Lab (pH Units)	6 to 9			

**Metals**

Arsenic (mg/kg)	0.39
Barium (mg/kg)	15000
Cadmium (mg/kg)	70
Chromium (mg/kg)	
Chromium+3 Calculated (mg/kg)	120000
Chromium, Hexavalent (mg/kg)	23
Copper (mg/kg)	3100
Lead (mg/kg)	400
Mercury (mg/kg)	23
Nickel (mg/kg)	1600
Selenium (mg/kg)	390
Silver (mg/kg)	390
Zinc (mg/kg)	23000

**Organic Compounds**

TPH-DRO (mg/kg)		<50	<50	<50
TPH-GRO (mg/kg)		<0.50	<0.50	<0.50
Benzene (mg/kg)	0.17	<0.0050	<0.0050	<0.0050
Toluene (mg/kg)	85	<0.0050	<0.0050	<0.0050
Ethylbenzene (mg/kg)	100	<0.0050	<0.0050	<0.0050
Xylenes, Total (mg/kg)	175	<0.0050	<0.0050	0.013
Acenaphthene (mg/kg)	1000			
Anthracene (mg/kg)	1000			
Benzo (a) anthracene (mg/kg)	0.22			
Benzo (b) fluoranthene (mg/kg)	0.22			
Benzo (k) fluoranthene (mg/kg)	2.2			
Benzo (a) pyrene (mg/kg)	0.022			
Chrysene (mg/kg)	22			
Dibenz (a,h) anthracene (mg/kg)	0.022			
Fluoranthene (mg/kg)	1000			
Fluorene (mg/kg)	1000			
Indeno (1,2,3-cd) pyrene (mg/kg)	0.22			
Naphthalene (mg/kg)	23			
Pyrene (mg/kg)	1000			



**TABLE 1 (Continued)**  
**SOIL ANALYTICAL RESULTS**  
**MILLER 10 RELEASE**  
**GARFIELD COUNTY, COLORADO**  
**BILL BARRETT CORPORATION**

Parameter	Standard	S02	S03	W01
Depth (feet)		7	7	7
Sample Date		4/20/2011	4/20/2011	4/20/2011

**Notes:**

< - less than stated laboratory reporting limit

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Basic Standards for Soil are taken from 2 CCR 404-1, Table 910-1, effective April 2009.

GRO - Gasoline Range Organics

TPH-Total - sum of TPH-GRO and TPH-DRO

mg/kg - milligrams per kilogram

mmhos/cm - millimhos per centimeter

TPH - Total Petroleum Hydrocarbons (C6-C28)

DRO - Diesel Range Organics

SAR - Sodium Adsorption Ratio



# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 29, 2011

Brian Dodek  
LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada, CO 80003  
RE: BBC - Miller 10 Release

Enclosed are the results of analyses for samples received by Summit Scientific on 04/22/11 10:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' or 'Shrewsbury', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury  
President / Laboratory Director



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

Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

**Reported:**  
04/29/11 14:28

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01-10'	R104132-01	Soil	04/20/11 19:00	04/22/11 10:35
B02-10'	R104132-02	Soil	04/20/11 19:20	04/22/11 10:35
B03-10'	R104132-03	Soil	04/20/11 19:30	04/22/11 10:35
N01-8'	R104132-04	Soil	04/20/11 19:45	04/22/11 10:35
N02-8'	R104132-05	Soil	04/20/11 19:55	04/22/11 10:35
N03-8'	R104132-06	Soil	04/20/11 20:00	04/22/11 10:35
S01-7'	R104132-07	Soil	04/20/11 20:10	04/22/11 10:35
S02-7'	R104132-08	Soil	04/20/11 20:25	04/22/11 10:35
S03-7'	R104132-09	Soil	04/20/11 20:30	04/22/11 10:35
E01-7'	R104132-10	Soil	04/20/11 20:40	04/22/11 10:35
W01-7'	R104132-11	Soil	04/20/11 20:50	04/22/11 10:35

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: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

R104132.1

# Summit Scientific

741 Corporate Circle Suite 1 • Golden, Colorado 80401  
303-277-9310 • 303-277-9331 Fax

Page 1 of 2

Client: LT Environmental  
Address: 820 Megan Avenue Unit B  
City/State/Zip: Rifle, CO 81650  
Phone: (970) 285-9985 Fax: (970) 285-2467  
Sampler Name: Asher Weinberg  
Project Manager: Brian Dodek  
E-Mail: bdodek@ltenv.com  
Project Name: Miller 10 Release  
Project Number: 0273-11012

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative			Matrix		Analyze For:						Special Instructions		
				HCl	HNO <sub>3</sub>	None	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	TPH DRO	BTEX/TPH-GRO	PAHs	EC, pH, SAR		Table 910-1 Metals	Total Arsenic 6020
1:01-10	4/20/11	19:00	2			X											
1:02-10	4/20/11	19:20	1														
1:03-10	4/20/11	19:30	1														
1:04-5	4/20/11	19:45	1														
1:05-5	4/20/11	19:55	1														
1:06-5	4/20/11	20:00	1														
1:07-5	4/20/11	20:10	1														
1:08-5	4/20/11	20:25	1														
1:09-5	4/20/11	20:30	1														
1:10-5	4/20/11	20:40	1														
Relinquished by:	Date/Time: 4/21/11 13:42	Received by:	Date/Time: 4/29/11	Relinquished by:	Date/Time: 4/29/11	Received in Lab by:	Date/Time:	Turn Around Time (Check)	Same Day	24 Hours	48 Hours	72 Hours	Standard	Notes:	N/A Results ASAP Metals: Barium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver, Zinc		

www.s2scientific.com



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

Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

**Reported:**  
04/29/11 14:28

R104132.2

Summit Scientific

741 Corporate Circle Suite I ♦ Golden, Colorado 80401  
303-277-9310 ♦ 303-277-9531 Fax

Page 2 of 2

Client:	LT Environmental
Address:	820 Megan Avenue Unit B Rifle, CO 81650
City/State/Zip:	
Phone:	(970) 285-9985
Fax:	(970) 285 2467
Project Name:	Asber Weinberg
Project Number:	0273-11012
Project Manager:	Brian Dodek
E-Mail:	b.dodek@ltew.com
Project Name:	Miller 10 Release

[illegible]

[www.s2scientific.com](http://www.s2scientific.com)

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: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

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**Paul Shrewsbury**

**From:** Asher Weinberg [aweinberg@ltenv.com]  
**Sent:** Thursday, April 21, 2011 3:53 PM  
**To:** 'Paul Shrewsbury'; Ben Shrewsbury  
**Cc:** 'Brian Dodek'  
**Subject:** Miller 10 0273-11012  
**Importance:** High

Gentlemen,

We are shipping you some soil samples today for the Miller 10 that you should receive by tomorrow morning. We just spoke with the COGCC and we need to make some changes to the analyses on the COC. If you could please run the samples for the following analyses:

B01-10' Full Table 910-1 (BTEX/GRO, TPH-DRO, PAHs, Metals, EC, pH, and SAR)  
B02-10' Full Table 910-1 (BTEX/GRO, TPH-DRO, PAHs, Metals, EC, pH, and SAR)

All of the remaining samples (B03-10', N01-8', N02-8', N03-8', S01-7', S02-7', S03-7', E01-7', W01-7') run for BTEX/GRO, TPH-DRO, and EC.

If you could please add this email as an addendum to the COC in the final report or we can re-send a new COC if this makes things easier.

If you have any questions please get back to me. Thanks,

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

Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

**B01-10'**  
**R104132-01 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **04/20/11 19:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	1041804	04/22/11	04/23/11	EPA 8270D SIM	
Anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

Date Sampled: **04/20/11 19:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Nitrobenzene-d5		59.4 %	30-120		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		90.3 %	30-120		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		95.2 %	30-120		"	"	"	"	
Surrogate: Terphenyl-d14		106 %	30-120		"	"	"	"	

**Total Petroleum Hydrocarbons by 8015**

Date Sampled: **04/20/11 19:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1042206	04/22/11	04/23/11	8015 DRO	

Summit Scientific

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Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

**B01-10'**  
**R104132-01 (Soil)**

**Summit Scientific**

**Total Petroleum Hydrocarbons by 8015**

Date Sampled: **04/20/11 19:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		111 %	88.8-124		1042206	04/22/11	04/23/11	8015 DRO	

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

Date Sampled: **04/20/11 19:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1042205	04/22/11	04/23/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/20/11 19:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.6 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		98.1 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.4 %	78.4-125		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/20/11 19:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.711</b>	0.00100	mmhos/cm	1	1042207	04/22/11	04/22/11	SM 2510B	

Date Sampled: **04/20/11 19:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.5</b>		pH Units	"	1042105	04/22/11	04/22/11	EPA 9045B	

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Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

**B01-10'**  
**R104132-01 (Soil)**

**Summit Scientific**

**Colorado Analytical Laboratories**

Date Sampled: **04/20/11 19:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	2.5	0.1	meq/L	1	1042901	04/28/11	04/29/11	USDA60 6 (20b)	

Date Sampled: **04/20/11 19:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Magnesium	2.7	0.1	"	"	"	"	"	"	

Date Sampled: **04/20/11 19:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium	13	0.1	"	"	"	"	"	"	

Date Sampled: **04/20/11 19:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	0.05	mg/kg	"	"	04/27/11	"	SW6020	
Barium	194.2	0.1	"	"	"	"	"	"	
Cadmium	0.2	0.1	"	"	"	"	"	"	
Copper	13.7	0.1	"	"	"	"	"	"	
Lead	11.5	0.1	"	"	"	"	"	"	
Nickel	15.2	0.1	"	"	"	"	"	"	
Selenium	0.68	0.05	"	"	"	"	"	"	
Silver	ND	0.1	"	"	"	"	"	"	
Zinc	45.24	0.05	"	"	"	"	"	"	

**Colorado Analytical Laboratories - Calculated Analytes**

Date Sampled: **04/20/11 19:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	8.1	0.1	units	1	1042901	04/28/11	04/29/11	Calculation	

Summit Scientific

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Project: BBC - Miller 10 Release  
Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

**B01-10'**  
**R104132-01 (Soil)**

**Summit Scientific**

**Colorado Analytical Laboratories - Total Metals by APHA/EPA Methods**

Date Sampled: **04/20/11 19:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.05	mg/kg	1	1042901	04/28/11	04/29/11	EPA 7471A	

**Evergreen Analytical Laboratories**

Date Sampled: **04/20/11 19:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium	13	1.4	mg/kg	1	1042803	04/28/11	04/28/11	EPA 6010A	

**Evergreen Analytical - 6010 Hexavalent Chromium, Soil (3060A Mod Digest)**

Date Sampled: **04/20/11 19:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	0.63	0.55	mg/kg	1	1042803	"	04/28/11	3060A/7196 A	

**Evergreen Analytical - Trivalent Chromium, Calculated, Soil Basis**

Date Sampled: **04/20/11 19:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	12.4	2	mg/kg	1	1042803	"	04/28/11	CalcCr+3	

Summit Scientific

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Arvada CO, 80003

Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

**B02-10'**  
**R104132-02 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **04/20/11 19:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	1041804	04/22/11	04/24/11	EPA 8270D SIM	
Anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	5.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

Date Sampled: **04/20/11 19:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Nitrobenzene-d5		52.3 %	30-120		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		90.8 %	30-120		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		91.8 %	30-120		"	"	"	"	
Surrogate: Terphenyl-d14		107 %	30-120		"	"	"	"	

**Total Petroleum Hydrocarbons by 8015**

Date Sampled: **04/20/11 19:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1042206	04/22/11	04/23/11	8015 DRO	

Date Sampled: **04/20/11 19:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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LT Environmental, Inc.  
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Arvada CO, 80003

Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

**B02-10'**  
**R104132-02 (Soil)**

**Summit Scientific**

**Total Petroleum Hydrocarbons by 8015**

Surrogate: o-Terphenyl	98.7 %	88.8-124	1042206	04/22/11	04/23/11	8015 DRO
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**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/20/11 19:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1042205	04/22/11	04/23/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/20/11 19:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		97.0 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.8 %	78.4-125		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/20/11 19:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.432</b>	0.00100	mmhos/cm	1	1042207	04/22/11	04/22/11	SM 2510B	

Date Sampled: **04/20/11 19:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.6</b>		pH Units	"	1042105	04/22/11	04/22/11	EPA 9045B	

**Colorado Analytical Laboratories**

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4600 West 60th Avenue  
Arvada CO, 80003

Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

**B02-10'**  
**R104132-02 (Soil)**

**Summit Scientific**

**Colorado Analytical Laboratories**

Date Sampled: **04/20/11 19:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	5.2	0.1	meq/L	1	1042901	04/28/11	04/29/11	USDA60 6 (20b)	

Date Sampled: **04/20/11 19:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Magnesium	6.2	0.1	"	"	"	"	"	"	

Date Sampled: **04/20/11 19:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium	10.6	0.1	"	"	"	"	"	"	

Date Sampled: **04/20/11 19:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	0.05	mg/kg	"	"	04/27/11	"	SW6020	
Barium	210.1	0.1	"	"	"	"	"	"	
Cadmium	0.2	0.1	"	"	"	"	"	"	
Copper	12.5	0.1	"	"	"	"	"	"	
Lead	11.3	0.1	"	"	"	"	"	"	
Nickel	15.3	0.1	"	"	"	"	"	"	
Selenium	0.23	0.05	"	"	"	"	"	"	
Silver	ND	0.1	"	"	"	"	"	"	
Zinc	43.34	0.05	"	"	"	"	"	"	

**Colorado Analytical Laboratories - Calculated Analytes**

Date Sampled: **04/20/11 19:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.5	0.1	units	1	1042901	04/28/11	04/29/11	Calculation	

Summit Scientific

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Project: BBC - Miller 10 Release  
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Reported:  
04/29/11 14:28

**B02-10'**  
**R104132-02 (Soil)**

**Summit Scientific**

**Colorado Analytical Laboratories - Total Metals by APHA/EPA Methods**

Date Sampled: **04/20/11 19:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.05	mg/kg	1	1042901	04/28/11	04/29/11	EPA 7471A	

**Evergreen Analytical Laboratories**

Date Sampled: **04/20/11 19:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium	12.6	1.2	mg/kg	1	1042803	04/28/11	04/28/11	EPA 6010A	

**Evergreen Analytical - 6010 Hexavalent Chromium, Soil (3060A Mod Digest)**

Date Sampled: **04/20/11 19:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	0.62	0.51	mg/kg	1	1042803	"	04/28/11	3060A/7196 A	

**Evergreen Analytical - Trivalent Chromium, Calculated, Soil Basis**

Date Sampled: **04/20/11 19:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	12	1.7	mg/kg	1	1042803	"	04/28/11	CalcCr+3	

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LT Environmental, Inc.  
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Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

**B03-10'**  
**R104132-03 (Soil)**

**Summit Scientific**

**Total Petroleum Hydrocarbons by 8015**

Date Sampled: **04/20/11 19:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	130	50	mg/kg	1	1042206	04/22/11	04/23/11	8015 DRO	

Date Sampled: **04/20/11 19:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		103 %	88.8-124		"	"	"	"	

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

Date Sampled: **04/20/11 19:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.010	0.0050	mg/kg	1	1042205	04/22/11	04/23/11	EPA 8260B	
Toluene	0.38	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.081	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.99	0.050	"	10	"	"	"	"	
Gasoline Range Hydrocarbons	9.0	5.0	"	"	"	"	"	"	

Date Sampled: **04/20/11 19:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		99.1 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.8 %	78.4-125		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/20/11 19:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.839	0.00100	mmhos/cm	1	1042207	04/22/11	04/22/11	SM 2510B	

Summit Scientific

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Reported:  
04/29/11 14:28

**N01-8'**  
**R104132-04 (Soil)**

**Summit Scientific**

**Total Petroleum Hydrocarbons by 8015**

Date Sampled: **04/20/11 19:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1042206	04/22/11	04/24/11	8015 DRO	

Date Sampled: **04/20/11 19:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		107 %	88.8-124		"	"	"	"	

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

Date Sampled: **04/20/11 19:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1042205	04/22/11	04/23/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	04/23/11	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/20/11 19:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	67.4-143		"	"	04/23/11	"	
Surrogate: Toluene-d8		98.0 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.0 %	78.4-125		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/20/11 19:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.928</b>	0.00100	mmhos/cm	1	1042207	04/22/11	04/22/11	SM 2510B	

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4600 West 60th Avenue  
Arvada CO, 80003

Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

**Reported:**  
04/29/11 14:28

**N01-8'**  
**R104132-04 (Soil)**

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



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

Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

**N02-8'**  
**R104132-05 (Soil)**

**Summit Scientific**

**Total Petroleum Hydrocarbons by 8015**

Date Sampled: **04/20/11 19:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1042206	04/22/11	04/24/11	8015 DRO	

Date Sampled: **04/20/11 19:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		106 %	88.8-124		"	"	"	"	

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

Date Sampled: **04/20/11 19:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1042205	04/22/11	04/23/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/20/11 19:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		100 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		97.7 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.5 %	78.4-125		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/20/11 19:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.737</b>	0.00100	mmhos/cm	1	1042207	04/22/11	04/22/11	SM 2510B	

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4600 West 60th Avenue  
Arvada CO, 80003

Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

**Reported:**  
04/29/11 14:28

**N02-8'**  
**R104132-05 (Soil)**

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Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

**N03-8'**  
**R104132-06 (Soil)**

**Summit Scientific**

**Total Petroleum Hydrocarbons by 8015**

Date Sampled: **04/20/11 20:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1042206	04/22/11	04/24/11	8015 DRO	

Date Sampled: **04/20/11 20:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		104 %	88.8-124		"	"	"	"	

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

Date Sampled: **04/20/11 20:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1042205	04/22/11	04/23/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/20/11 20:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.9 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		97.8 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.8 %	78.4-125		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/20/11 20:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.692</b>	0.00100	mmhos/cm	1	1042207	04/22/11	04/22/11	SM 2510B	

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4600 West 60th Avenue  
Arvada CO, 80003

Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

**Reported:**  
04/29/11 14:28

**N03-8'**  
**R104132-06 (Soil)**

---

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4600 West 60th Avenue  
Arvada CO, 80003

Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

**S01-7'**  
**R104132-07 (Soil)**

**Summit Scientific**

**Total Petroleum Hydrocarbons by 8015**

Date Sampled: **04/20/11 20:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1042206	04/22/11	04/24/11	8015 DRO	

Date Sampled: **04/20/11 20:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		104 %	88.8-124		"	"	"	"	

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

Date Sampled: **04/20/11 20:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1042205	04/22/11	04/23/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	<b>0.0071</b>	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/20/11 20:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.8 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		97.3 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.8 %	78.4-125		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/20/11 20:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.822</b>	0.00100	mmhos/cm	1	1042207	04/22/11	04/22/11	SM 2510B	

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Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

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**S01-7'**  
**R104132-07 (Soil)**

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Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

**S02-7'**  
**R104132-08 (Soil)**

**Summit Scientific**

**Total Petroleum Hydrocarbons by 8015**

Date Sampled: **04/20/11 20:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1042206	04/22/11	04/24/11	8015 DRO	

Date Sampled: **04/20/11 20:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		108 %	88.8-124		"	"	"	"	

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

Date Sampled: **04/20/11 20:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1042205	04/22/11	04/23/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/20/11 20:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		96.7 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.0 %	78.4-125		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/20/11 20:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.604</b>	0.00100	mmhos/cm	1	1042207	04/22/11	04/22/11	SM 2510B	

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Project: BBC - Miller 10 Release

Project Number: 0273-11012  
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**S02-7'**  
**R104132-08 (Soil)**

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Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

**S03-7'**  
**R104132-09 (Soil)**

**Summit Scientific**

**Total Petroleum Hydrocarbons by 8015**

Date Sampled: **04/20/11 20:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1042206	04/22/11	04/24/11	8015 DRO	

Date Sampled: **04/20/11 20:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		102 %	88.8-124		"	"	"	"	

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

Date Sampled: **04/20/11 20:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1042205	04/22/11	04/23/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/20/11 20:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.6 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		97.2 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.0 %	78.4-125		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/20/11 20:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.636</b>	0.00100	mmhos/cm	1	1042207	04/22/11	04/22/11	SM 2510B	

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**S03-7'**  
**R104132-09 (Soil)**

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**E01-7'**  
**R104132-10 (Soil)**

**Summit Scientific**

**Total Petroleum Hydrocarbons by 8015**

Date Sampled: **04/20/11 20:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1042206	04/22/11	04/24/11	8015 DRO	

Date Sampled: **04/20/11 20:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		109 %	88.8-124		"	"	"	"	

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

Date Sampled: **04/20/11 20:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1042205	04/22/11	04/23/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.0096</b>	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/20/11 20:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		97.7 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.4 %	78.4-125		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/20/11 20:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Specific Conductance (EC)</b>	<b>0.362</b>	0.00100	mmhos/cm	1	1042207	04/22/11	04/22/11	SM 2510B	

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Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

**Reported:**  
04/29/11 14:28

**E01-7'**  
**R104132-10 (Soil)**

---

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Project: BBC - Miller 10 Release  
Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

**W01-7'**  
**R104132-11 (Soil)**

**Summit Scientific**

**Total Petroleum Hydrocarbons by 8015**

Date Sampled: **04/20/11 20:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1042206	04/22/11	04/24/11	8015 DRO	

Date Sampled: **04/20/11 20:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		107 %	88.8-124		"	"	"	"	

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

Date Sampled: **04/20/11 20:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1042205	04/22/11	04/23/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.013</b>	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **04/20/11 20:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		97.6 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.1 %	78.4-125		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/20/11 20:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Specific Conductance (EC)</b>	<b>1.57</b>	0.00100	mmhos/cm	1	1042207	04/22/11	04/22/11	SM 2510B	

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Project: BBC - Miller 10 Release

Project Number: 0273-11012  
Project Manager: Brian Dodek

**Reported:**  
04/29/11 14:28

**W01-7'**  
**R104132-11 (Soil)**

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Project: BBC - Miller 10 Release  
Project Number: 0273-11012  
Project Manager: Brian Dodek

**Reported:**  
04/29/11 14:28

## Semivolatile Organic Compounds by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch 1041804 - EPA 3550A

##### Blank (1041804-BLK1)

Prepared: 04/22/11 Analyzed: 04/23/11

Acenaphthene	ND	5.00	ug/kg							
Anthracene	ND	5.00	"							
Benzo (a) anthracene	ND	5.00	"							
Benzo (b) fluoranthene	ND	5.00	"							
Benzo (k) fluoranthene	ND	5.00	"							
Benzo (a) pyrene	ND	5.00	"							
Chrysene	ND	5.00	"							
Dibenz (a,h) anthracene	ND	10.0	"							
Fluoranthene	ND	5.00	"							
Fluorene	ND	5.00	"							
Indeno (1,2,3-cd) pyrene	ND	10.0	"							
Naphthalene	ND	5.00	"							
Pyrene	ND	5.00	"							
Surrogate: Nitrobenzene-d5	20.1		"	33.3	60.4	30-120				
Surrogate: 2-Fluorobiphenyl	30.5		"	33.3	91.6	30-120				
Surrogate: 2,4,6-Tribromophenol	40.7		"	33.3	122	30-120				
Surrogate: Terphenyl-d14	36.3		"	33.3	109	30-120				

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Project: BBC - Miller 10 Release  
Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

**Semivolatile Organic Compounds by EPA Method 8270D SIM - Quality Control**  
**Summit Scientific**

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

**Batch 1041804 - EPA 3550A**

**LCS (1041804-BS1)**

Prepared: 04/22/11 Analyzed: 04/23/11

Acenaphthene	26.1	5.00	ug/kg	33.3		78.3	30-120		30	
Anthracene	28.5	5.00	"	33.3		85.6	30-120		30	
Benzo (a) anthracene	27.8	5.00	"	33.3		83.3	30-120		30	
Benzo (b) fluoranthene	28.6	5.00	"	33.3		85.7	30-120		30	
Benzo (k) fluoranthene	27.2	5.00	"	33.3		81.6	30-120		30	
Benzo (a) pyrene	25.9	5.00	"	33.3		77.8	30-120		30	
Chrysene	27.5	5.00	"	33.3		82.5	30-120		30	
Dibenz (a,h) anthracene	23.7	10.0	"	33.3		71.2	30-120		30	
Fluoranthene	30.0	5.00	"	33.3		89.9	30-120		30	
Fluorene	28.7	5.00	"	33.3		86.1	30-120		30	
Indeno (1,2,3-cd) pyrene	25.0	10.0	"	33.3		75.0	30-120		30	
Naphthalene	45.5	5.00	"	33.3		137	30-120		30	
Pyrene	26.6	5.00	"	33.3		79.9	30-120		30	
Surrogate: Nitrobenzene-d5	22.2		"	33.3		66.6	30-120			
Surrogate: 2-Fluorobiphenyl	34.0		"	33.3		102	30-120			
Surrogate: 2,4,6-Tribromophenol	43.6		"	33.3		131	30-120			
Surrogate: Terphenyl-d14	35.4		"	33.3		106	30-120			

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Project Number: 0273-11012  
Project Manager: Brian Dodek

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**Semivolatile Organic Compounds by EPA Method 8270D SIM - Quality Control**  
**Summit Scientific**

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

**Batch 1041804 - EPA 3550A**

Matrix Spike (1041804-MS1)		Source: R104132-01			Prepared: 04/22/11		Analyzed: 04/23/11			
Acenaphthene	23.6	5.00	ug/kg	33.3	ND	70.7	30-120		30	
Anthracene	25.3	5.00	"	33.3	ND	75.9	30-120		30	
Benzo (a) anthracene	25.4	5.00	"	33.3	ND	76.3	30-120		30	
Benzo (b) fluoranthene	25.7	5.00	"	33.3	ND	77.1	30-120		30	
Benzo (k) fluoranthene	24.0	5.00	"	33.3	ND	71.9	30-120		30	
Benzo (a) pyrene	24.3	5.00	"	33.3	ND	72.9	30-120		30	
Chrysene	24.2	5.00	"	33.3	ND	72.6	30-120		30	
Dibenz (a,h) anthracene	24.6	10.0	"	33.3	ND	73.7	30-120		30	
Fluoranthene	26.9	5.00	"	33.3	ND	80.7	30-120		30	
Fluorene	25.6	5.00	"	33.3	ND	76.7	30-120		30	
Indeno (1,2,3-cd) pyrene	24.7	10.0	"	33.3	ND	74.1	30-120		30	
Naphthalene	44.4	5.00	"	33.3	ND	133	30-120		30	
Pyrene	24.2	5.00	"	33.3	ND	72.5	30-120		30	
Surrogate: Nitrobenzene-d5	18.4		"	33.3		55.1	30-120			
Surrogate: 2-Fluorobiphenyl	29.9		"	33.3		89.6	30-120			
Surrogate: 2,4,6-Tribromophenol	28.7		"	33.3		86.2	30-120			
Surrogate: Terphenyl-d14	30.2		"	33.3		90.5	30-120			

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

Project: BBC - Miller 10 Release  
Project Number: 0273-11012  
Project Manager: Brian Dodek

Reported:  
04/29/11 14:28

**Semivolatile Organic Compounds by EPA Method 8270D SIM - Quality Control**  
**Summit Scientific**

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

**Batch 1041804 - EPA 3550A**

Matrix Spike Dup (1041804-MSD1)		Source: R104132-01			Prepared: 04/22/11		Analyzed: 04/23/11			
Acenaphthene	24.7	5.00	ug/kg	33.3	ND	74.2	30-120	4.83	30	
Anthracene	25.9	5.00	"	33.3	ND	77.6	30-120	2.24	30	
Benzo (a) anthracene	24.1	5.00	"	33.3	ND	72.4	30-120	5.22	30	
Benzo (b) fluoranthene	25.1	5.00	"	33.3	ND	75.4	30-120	2.25	30	
Benzo (k) fluoranthene	24.6	5.00	"	33.3	ND	73.9	30-120	2.69	30	
Benzo (a) pyrene	24.1	5.00	"	33.3	ND	72.4	30-120	0.668	30	
Chrysene	27.3	5.00	"	33.3	ND	81.8	30-120	11.9	30	
Dibenz (a,h) anthracene	24.1	10.0	"	33.3	ND	72.2	30-120	2.00	30	
Fluoranthene	27.5	5.00	"	33.3	ND	82.6	30-120	2.31	30	
Fluorene	26.2	5.00	"	33.3	ND	78.7	30-120	2.63	30	
Indeno (1,2,3-cd) pyrene	27.6	10.0	"	33.3	ND	82.8	30-120	11.1	30	
Naphthalene	45.0	5.00	"	33.3	ND	135	30-120	1.29	30	
Pyrene	26.1	5.00	"	33.3	ND	78.2	30-120	7.63	30	
Surrogate: Nitrobenzene-d5	18.3		"	33.3		54.9	30-120			
Surrogate: 2-Fluorobiphenyl	30.1		"	33.3		90.3	30-120			
Surrogate: 2,4,6-Tribromophenol	25.1		"	33.3		75.3	30-120			
Surrogate: Terphenyl-d14	30.9		"	33.3		92.6	30-120			

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**Semivolatile Organic Compounds by EPA Method 8270D SIM - Quality Control**  
**Summit Scientific**

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

**Total 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 1042206 - EPA 3550A**

**Blank (1042206-BLK1)**

Prepared: 04/22/11 Analyzed: 04/24/11

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 13.1 " 12.5 105 88.8-124

**LCS (1042206-BS1)**

Prepared: 04/22/11 Analyzed: 04/24/11

C10-C28 (DRO) 522 50 mg/kg 501 104 81.4-129 9.26

**LCS Dup (1042206-BSD1)**

Prepared: 04/22/11 Analyzed: 04/24/11

C10-C28 (DRO) 521 50 mg/kg 501 104 81.4-129 0.212 9.26

**Matrix Spike (1042206-MS1)**

Source: R104132-04

Prepared: 04/22/11 Analyzed: 04/24/11

C10-C28 (DRO) 537 50 mg/kg 501 44.2 98.3 77.8-133 8.48

**Matrix Spike Dup (1042206-MSD1)**

Source: R104132-04

Prepared: 04/22/11 Analyzed: 04/24/11

C10-C28 (DRO) 522 50 mg/kg 501 44.2 95.3 77.8-133 2.83 8.48

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**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 1042205 - EPA 5030 Soil MS**

**Blank (1042205-BLK1)**

Prepared: 04/22/11 Analyzed: 04/23/11

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	0.0573		"	0.0400		143	67.4-143			
Surrogate: Toluene-d8	0.0391		"	0.0400		97.8	77.3-114			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.7	78.4-125			

**LCS (1042205-BS1)**

Prepared: 04/22/11 Analyzed: 04/23/11

Benzene	0.0877	0.0050	mg/kg	0.100		87.7	61-139		11.1	
Toluene	0.0972	0.0050	"	0.100		97.2	64-132		10.9	
Ethylbenzene	0.109	0.0050	"	0.100		109	68.7-135		20	
m,p-Xylene	0.216	0.010	"	0.200		108	70.4-129		20	
o-Xylene	0.102	0.0050	"	0.100		102	66.9-126		20	
Surrogate: 1,2-Dichloroethane-d4	0.0405		"	0.0400		101	67.4-143			
Surrogate: Toluene-d8	0.0388		"	0.0400		97.1	77.3-114			
Surrogate: 4-Bromofluorobenzene	0.0372		"	0.0400		92.9	78.4-125			

**LCS Dup (1042205-BSD1)**

Prepared: 04/22/11 Analyzed: 04/23/11

Benzene	0.0882	0.0050	mg/kg	0.100		88.2	61-139	0.614	11.1	
Toluene	0.101	0.0050	"	0.100		101	64-132	3.61	10.9	
Ethylbenzene	0.112	0.0050	"	0.100		112	68.7-135	3.17	20	
m,p-Xylene	0.224	0.010	"	0.200		112	70.4-129	3.41	20	
o-Xylene	0.106	0.0050	"	0.100		106	66.9-126	3.55	20	
Surrogate: 1,2-Dichloroethane-d4	0.0400		"	0.0400		99.9	67.4-143			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.8	77.3-114			
Surrogate: 4-Bromofluorobenzene	0.0375		"	0.0400		93.7	78.4-125			

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**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 1042205 - EPA 5030 Soil MS**

Matrix Spike (1042205-MS1)		Source: R104132-04			Prepared: 04/22/11		Analyzed: 04/23/11			
Benzene	0.0885	0.0050	mg/kg	0.100	ND	88.5	42.9-137		17.9	
Toluene	0.102	0.0050	"	0.100	ND	102	42.6-130		11.9	
Ethylbenzene	0.111	0.0050	"	0.100	ND	111	39-133		20	
m,p-Xylene	0.225	0.010	"	0.200	0.00375	110	34.7-134		20	
o-Xylene	0.106	0.0050	"	0.100	ND	106	41.3-126		20	
Surrogate: 1,2-Dichloroethane-d4	0.0407		"	0.0400		102	67.4-143			
Surrogate: Toluene-d8	0.0392		"	0.0400		98.0	77.3-114			
Surrogate: 4-Bromofluorobenzene	0.0371		"	0.0400		92.8	78.4-125			
Matrix Spike Dup (1042205-MSD1)		Source: R104132-04			Prepared: 04/22/11		Analyzed: 04/23/11			
Benzene	0.0875	0.0050	mg/kg	0.100	ND	87.5	42.9-137	1.09	17.9	
Toluene	0.102	0.0050	"	0.100	ND	102	42.6-130	0.0591	11.9	
Ethylbenzene	0.111	0.0050	"	0.100	ND	111	39-133	0.135	20	
m,p-Xylene	0.225	0.010	"	0.200	0.00375	110	34.7-134	0.0534	20	
o-Xylene	0.106	0.0050	"	0.100	ND	106	41.3-126	0.0567	20	
Surrogate: 1,2-Dichloroethane-d4	0.0413		"	0.0400		103	67.4-143			
Surrogate: Toluene-d8	0.0393		"	0.0400		98.2	77.3-114			
Surrogate: 4-Bromofluorobenzene	0.0377		"	0.0400		94.2	78.4-125			

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**Physical Parameters by APHA/ASTM/EPA Methods - Quality Control**  
**Summit Scientific**

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

**Batch 1042105 - General Preparation**

<b>Duplicate (1042105-DUP1)</b>		<b>Source: R104100-01</b>		Prepared & Analyzed: 04/22/11							
pH	8.7		pH Units		8.6			1.28		20	

**Batch 1042207 - General Preparation**

<b>Duplicate (1042207-DUP1)</b>		<b>Source: R104132-01</b>		Prepared & Analyzed: 04/22/11							
Specific Conductance (EC)	0.762	0.00100	mmhos/cm		0.711			6.92		20	

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**Reported:**  
04/29/11 14:28

### 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

A handwritten signature in black ink, appearing to be 'JMM' followed by a long horizontal stroke.