

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

REM 9575
Document 2525974
Date 03/28/2016

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.

OGCC Employee: _____

Spill Complaint
 Inspection NOAV

Tracking No: _____

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

Spill or Release Plug & Abandon Central Facility Closure Site/Facility Closure Other (describe): _____

GENERAL INFORMATION

OGCC Operator Number: 10071	Contact Name and Telephone
Name of Operator: <u>Bill Barrett Corporation (BBC)</u>	Name: <u>Scott Ghan</u>
Address: <u>112 Red Feather Trail</u>	No: <u>970-876-1959</u>
City: <u>Silt</u> State: <u>CO</u> Zip: <u>81652</u>	Fax: <u>970-876-0981</u>
API/Facility No: <u>05-045-07085</u>	County: <u>Garfield</u>
Facility Name: <u>Mamm Creek 13-33</u>	Facility Number: _____
Well Name: <u>Mamm Creek Federal</u>	Well Number: <u>13-33-6-92</u>
Location (Qtr, Sec, Twp, Rng, Meridian): <u>SWSW 33 6S 92W 6 PM</u>	Latitude: _____ Longitude: _____

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): Condensate and Produced Water

Site Conditions: Is location within a sensitive area (according to Rule 901e)? Y N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Rangeland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Torriorthents-Camborthids-Rock Outcrop Complex, Steep

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Surface water is located 753' west; a water well is located 933' northeast; buildings are located 2,281' east; depth to groundwater is estimated to be 40' below ground surface (bgs).

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	<u>65' N-S x 35' E-W x 19.5' bgs</u>	<u>Laboratory analysis and field screening of soil samples</u>
<input type="checkbox"/> Vegetation	_____	_____
<input type="checkbox"/> Groundwater	_____	_____
<input type="checkbox"/> Surface water	_____	_____

REMEDATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):
Form 19 submitted on May 23, 2011 (Spill #2214105).

Describe how source is to be removed:
BBC discovered a localized condensate/produced water release saturating the surface soils inside the secondary containment at the tank battery on May 10, 2011. An excavation was initiated to define and remove impacted soil. Excavated soil was screened with a photoionization detector and confirmation soil samples were collected from the extent of the excavation. A lined containment was constructed for storage of the excavated soils. Soil samples that were collected from the walls of the excavation were submitted for laboratory analysis of BTEX and TPH-GRO by EPA Method 8260B, TPH-DRO by EPA Method 8015, and EC by Standard Method 2510B. In addition to these analytes, soil samples that were collected from the base of the excavation were also submitted for laboratory analysis of PAHs by EPA Method 8270D SIM, pH by EPA Method 9045B, SAR by USDA Method 60 6 (20B), and Table 910-1 metals. Four background soil samples were collected from beyond the site extent and submitted for laboratory analysis of arsenic by EPA Method 6020. A topographic site location map and site map are provided as Figures 1 and 2. Soil analytical results are summarized in Table 1. The laboratory analytical 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 1,643 cubic yards of impacted soil have been placed within lined containment and will be remediated via on site land treatment.



Tracking Number: Name of Operator: Bill Barrett Corporation OGCC Operator No: 10071 Received Date: Well Name & No: Mamm Creek Federal #13-33-6-92 Facility Name & No.: Mamm Creek Federal #13-33-6-92

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 data from nearby water wells, the estimated depth to groundwater at the site is approximately 40' 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 site was restored to pre-release grade. BBC's production facility remains at the site.

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 [X] N If yes, describe: Laboratory analytical results indicate BTEX, TPH-GRO, TPH-DRO, PAHs, SAR, and Table 910-1 metal levels in soil are in compliance with the applicable Table 910-1 concentration levels or within background concentrations. The EC levels observed in soil samples E01, E02, and W01 as well as pH levels observed in base samples B01 and B02 are not in compliance with the Table 910-1 concentration level. However, Frequently Asked Question Number 31 on the COGCC website explains that the COGCC will apply the Table 910-1 concentration levels for EC, pH, and SAR only to soils that are within 3 feet of the ground surface. As such, the COGCC requires that materials with elevated EC, pH, or SAR concentrations be buried under a minimum of 3 feet of cover and a minimum of 3 feet above the static water level. As the soil samples were collected from a depths between 8' and 19.5' bgs, the EC exceedences do not extend below the base of the excavation, and groundwater is estimated to be at 40' bgs, BBC believes that the exceedance of EC and pH parameters will not affect reclamation, as the impacted soil is to be buried well below the vegetative root zone. Impacted soil that was excavated is currently being remediated via on site land treatment. Results from this activity will be submitted in a future Form 27.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.): Approximately 1,643 cubic yards of impacted soil have been placed within lined containment and will be remediated via on site land treatment.

IMPLEMENTATION SCHEDULE

Table with 4 columns: Date Site Investigation Began (5/12/2011), Date Site Investigation Completed (5/13/2011), Remediation Plan Submitted (7/19/2011), Remediation Start Date (5/20/2011), Anticipated Completion Date (NA), Actual Completion Date (TBD)

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: [Signature] Title: E H & S Coordinator Date: 7/19/2011

OGCC Approved: Title: Date:

This Form 27 was submitted by Bill Barrett in 2011 and resubmitted now by Vanguard. Vanguard will sample land farmed material to confirm compliance with Table 910-1 and request closure.

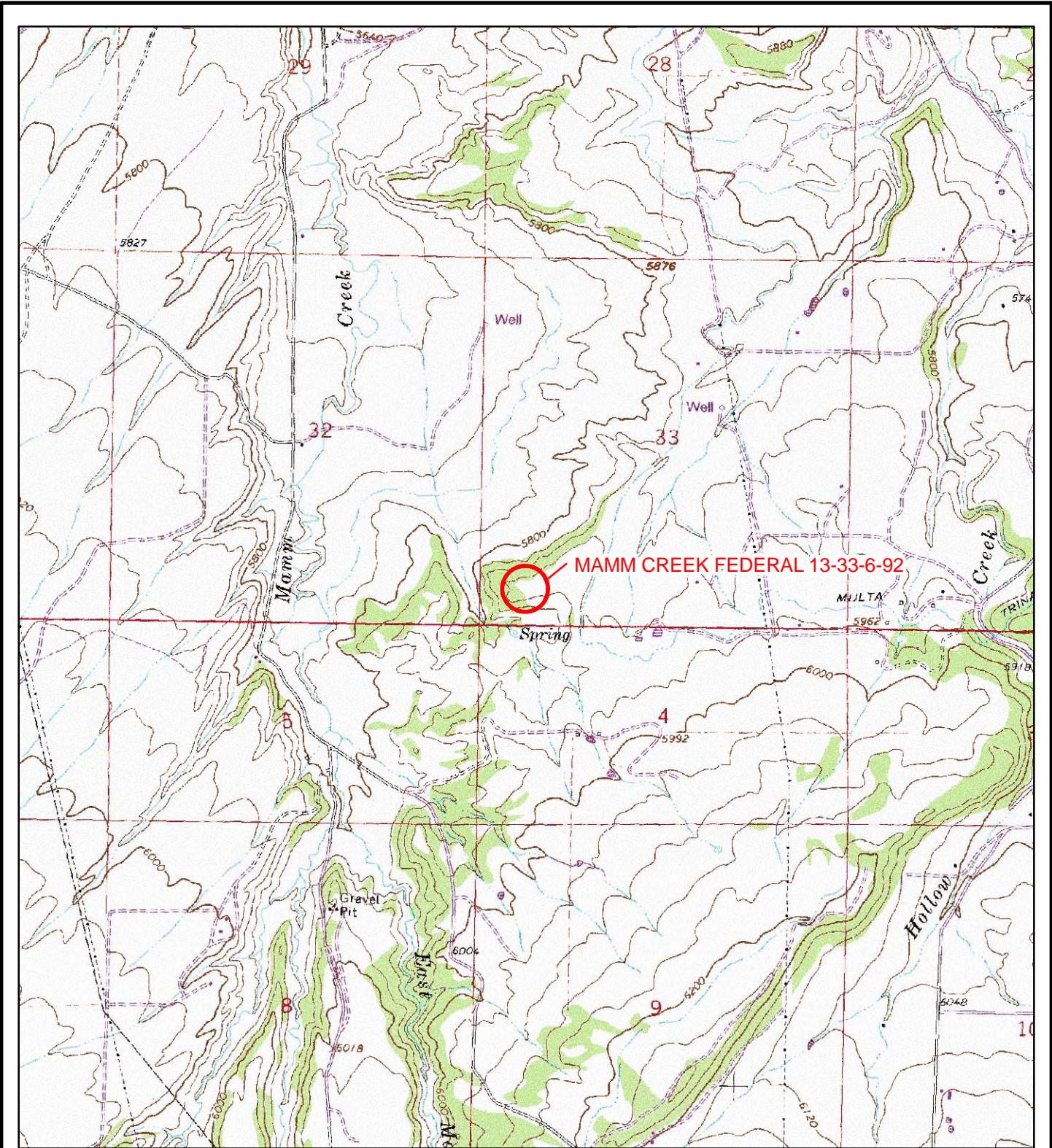


IMAGE COURTESY OF USDA/NRCS, VARIOUS DATES

LEGEND

 SITE LOCATION

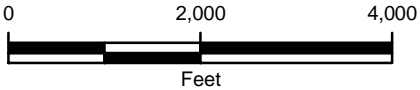
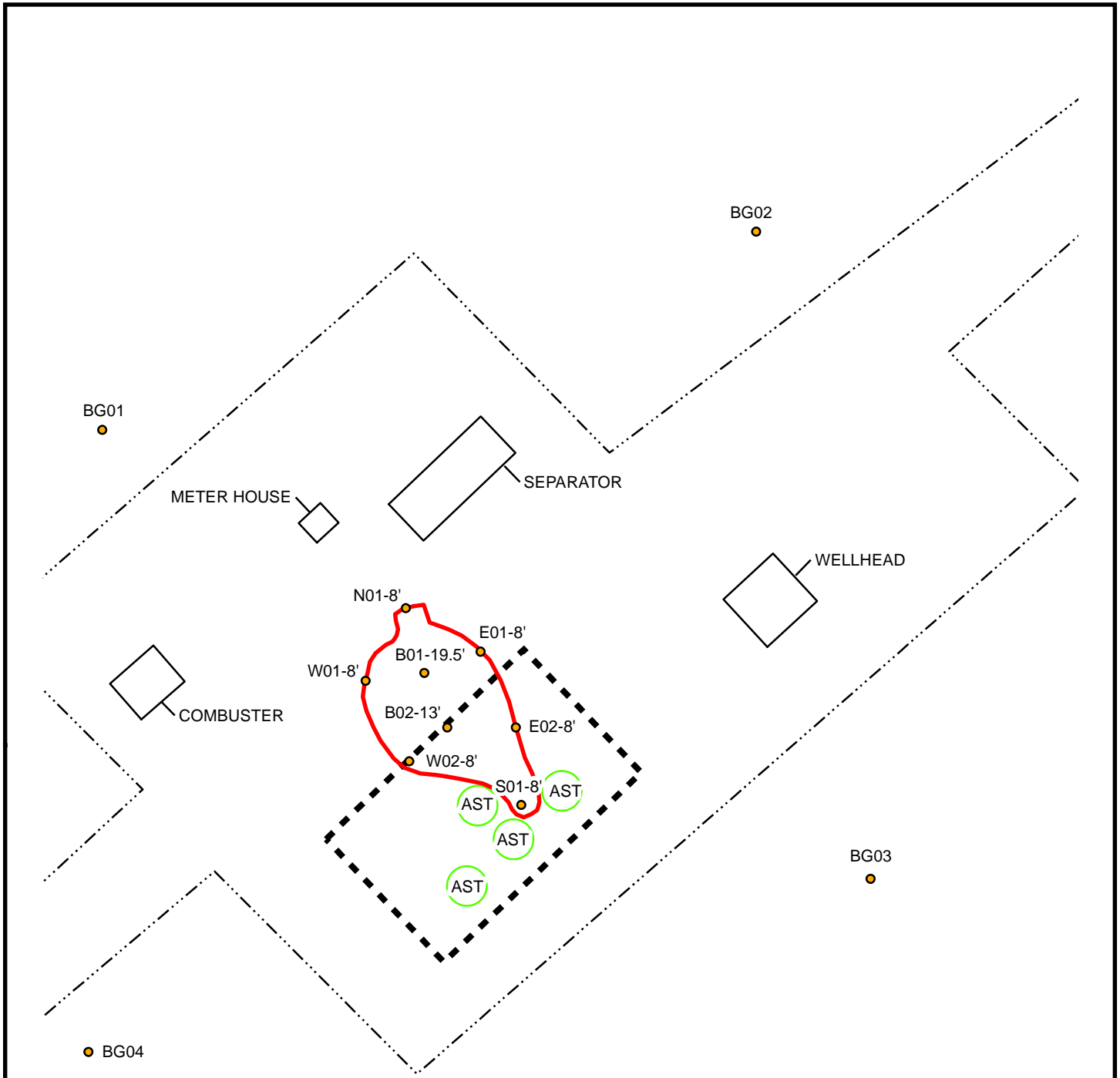


FIGURE 1
SITE LOCATION MAP
MAMM CREEK FEDERAL 13-33-6-92
SWSW SEC 33 T6S R92W
GARFIELD COUNTY, COLORADO
BILL BARRETT CORPORATION





LEGEND

- SOIL SAMPLE
- SITE BOUNDARY
- EXCAVATION EXTENT
- BERM
- ABOVEGROUND STORAGE TANK (AST)

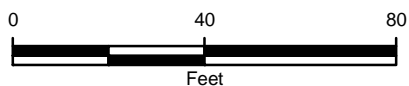


FIGURE 2
SITE MAP
 MAMM CREEK FEDERAL 13-33-6-92
 SWSW SEC 33 T6S R92W
 GARFIELD COUNTY, COLORADO
BILL BARRETT CORPORATION



TABLE 1
SOIL ANALYTICAL RESULTS
MAMM CREEK 13-33 (API No. 05-045-07085)
GARFIELD COUNTY, COLORADO
BILL BARRETT CORPORATION

Parameter	Standard	B01	B02	BG01	BG02
Depth (feet)		19.5	13	0.5	0.5
Sample Date		5/11/2011	5/11/2011	5/13/2011	5/13/2011

Inorganics

Electrical Conductivity (mmhos/cm)	4	1.83	1.26		
SAR (units)	12	10.8	6.5		
pH, Lab (pH Units)	6 to 9	9.1	9.1		

Metals

Arsenic (mg/kg)	0.39	0.59	0.66	2.78	3.38
Barium (mg/kg)	15000	280.4	237.3		
Cadmium (mg/kg)	70	<0.1	0.1		
Chromium (mg/kg)		5.4	9.3		
Chromium+3 Calculated (mg/kg)	120000	5	8.9		
Chromium, Hexavalent (mg/kg)	23	<0.44	0.43		
Copper (mg/kg)	3100	5.8	6.7		
Lead (mg/kg)	400	7.1	12.4		
Mercury (mg/kg)	23	<0.05	<0.05		
Nickel (mg/kg)	1600	12.8	12.4		
Selenium (mg/kg)	390	<0.05	<0.05		
Silver (mg/kg)	390	<0.1	<0.1		
Zinc (mg/kg)	23000	32.95	29		

Organic Compounds

TPH-DRO (mg/kg)		<50	<50		
TPH-GRO (mg/kg)		<0.50	<0.50		
TPH-Total (mg/kg)	500	<50.5	<50.5		
Benzene (mg/kg)	0.17	<0.0050	<0.0050		
Toluene (mg/kg)	85	<0.0050	<0.0050		
Ethylbenzene (mg/kg)	100	<0.0050	<0.0050		
Xylenes, Total (mg/kg)	175	<0.0050	0.028		
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	0.00709		
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 (Continued)
SOIL ANALYTICAL RESULTS
MAMM CREEK 13-33 (API No. 05-045-07085)
GARFIELD COUNTY, COLORADO
BILL BARRETT CORPORATION

Parameter	Standard	BG03	BG04	E01	E02
Depth (feet)		0.5	0.5	8	8
Sample Date		5/13/2011	5/13/2011	5/11/2011	5/11/2011

Inorganics

Electrical Conductivity (mmhos/cm)	4			6.85	7.30
SAR (units)	12				
pH, Lab (pH Units)	6 to 9				

Metals

Arsenic (mg/kg)	0.39	2.84	1.36		
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
TPH-GRO (mg/kg)				<0.50	<0.50
TPH-Total (mg/kg)	500			<50.5	<50.5
Benzene (mg/kg)	0.17			<0.0050	<0.0050
Toluene (mg/kg)	85			<0.0050	<0.0050
Ethylbenzene (mg/kg)	100			<0.0050	<0.0050
Xylenes, Total (mg/kg)	175			<0.0050	<0.0050
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
MAMM CREEK 13-33 (API No. 05-045-07085)
GARFIELD COUNTY, COLORADO
BILL BARRETT CORPORATION

Parameter	Standard	N01	S01	W01	W02
Depth (feet)		8	8	8	8
Sample Date		5/11/2011	5/11/2011	5/11/2011	5/11/2011

Inorganics

Electrical Conductivity (mmhos/cm)	4	3.36	0.844	4.47	1.18
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
TPH-Total (mg/kg)	500	<50.5	<50.5	<50.5	<50.5
Benzene (mg/kg)	0.17	<0.0050	<0.0050	0.017	<0.0050
Toluene (mg/kg)	85	<0.0050	<0.0050	0.031	<0.0050
Ethylbenzene (mg/kg)	100	<0.0050	<0.0050	<0.0050	<0.0050
Xylenes, Total (mg/kg)	175	<0.0050	<0.0050	0.033	<0.0050
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
MAMM CREEK 13-33 (API No. 05-045-07085)
GARFIELD COUNTY, COLORADO
BILL BARRETT CORPORATION

Parameter	Standard	N01	S01	W01	W02
Depth (feet)		8	8	8	8
Sample Date		5/11/2011	5/11/2011	5/11/2011	5/11/2011

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



Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.374.5933 - fax

May 20, 2011

Brian Dodek
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: BBC - Mamm Creek 13-33

Enclosed are the results of analyses for samples received by Summit Scientific on 05/13/11 09:23. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'PS', with a long horizontal flourish extending to the right.

Paul Shrewsbury For Ben Shrewsbury
President / Laboratory Director



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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N01-8'	R105074-01	Soil	05/11/11 15:30	05/13/11 09:23
E01-8'	R105074-02	Soil	05/11/11 16:00	05/13/11 09:23
E02-8'	R105074-03	Soil	05/11/11 13:30	05/13/11 09:23
S01-8'	R105074-04	Soil	05/11/11 12:15	05/13/11 09:23
W01-8'	R105074-05	Soil	05/11/11 16:45	05/13/11 09:23
W02-8'	R105074-06	Soil	05/11/11 17:00	05/13/11 09:23
B01-19.5'	R105074-07	Soil	05/11/11 10:27	05/13/11 09:23
B02-13'	R105074-08	Soil	05/11/11 15:30	05/13/11 09:23

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 - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

Summit Scientific

741 Corporate Circle Suite 1 ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-277-9531 Fax

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: Mamm Creek 13-33
Project Number: 0273-11016

Page 1 of 1

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative			Matrix			Analyze For:						Special Instructions	
				HCl	HNO ₃	None	Other (Specify)	Soil	Air - Canister Serial #	Other (Specify)	TPH DRO	BTEX/TPH-GRO	PAHs	PH, SAR	Total Arsenic 6020		Table 910-1 Metals*
N01-8'	5/11/2011	15:30	2	X	X							X	X				
E01-8'	5/11/2011	16:00	2	X	X							X	X				
B02-8'	5/12/2011	13:30	1	X	X							X	X				
S01-8'	5/12/2011	12:15	1	X	X							X	X				
W01-8'	5/12/2011	16:45	1	X	X							X	X				
W02-8'	5/12/2011	17:00	1	X	X							X	X				
B01-19.5'	5/12/2011	10:27	2	X	X							X	X	X	X	X	
B02-13'	5/12/2011	15:30	2	X	X							X	X	X	X	X	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)	Notes:										
<i>Asher</i>	5/13/11 9:33					Same Day	Metals* Bi, Cd, Cr(VI, Cr, Pb, Hg, Ni, Se, As, Zn										
Relinquished by:	Date/Time:	Received by:	Date/Time:	Received by:	Date/Time:	24 Hours	Standard										
						48 Hours											
Relinquished by:	Date/Time:	Received by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	Temperature Upon Receipt:										
						In tact: Yes No	57										

www.s2scientific.com



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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

N01-8'
R105074-01 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **05/11/11 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1051402	05/14/11	05/14/11	8015 DRO	

Date Sampled: **05/11/11 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		105 %	88.8-124		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/11/11 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1051401	05/14/11	05/14/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/11/11 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		100 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	78.4-125		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/11/11 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.36	0.00100	mmhos/cm	1	1051403	05/14/11	05/14/11	SM 2510B	

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 - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

E01-8'
R105074-02 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **05/11/11 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1051402	05/14/11	05/14/11	8015 DRO	

Date Sampled: **05/11/11 16:00**

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: **05/11/11 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1051401	05/14/11	05/14/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/11/11 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		98.9 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	78.4-125		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/11/11 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	6.85	0.00100	mmhos/cm	1	1051403	05/14/11	05/14/11	SM 2510B	

Summit Scientific

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

E02-8'
R105074-03 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **05/11/11 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1051402	05/14/11	05/14/11	8015 DRO	

Date Sampled: **05/11/11 13:30**

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: **05/11/11 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1051401	05/14/11	05/14/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/11/11 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		112 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		97.4 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.4 %	78.4-125		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/11/11 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	7.30	0.00100	mmhos/cm	1	1051403	05/14/11	05/14/11	SM 2510B	

Summit Scientific

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

S01-8'
R105074-04 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **05/11/11 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1051402	05/14/11	05/14/11	8015 DRO	

Date Sampled: **05/11/11 12:15**

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

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/11/11 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1051401	05/14/11	05/14/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/11/11 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		101 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.0 %	78.4-125		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/11/11 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.844	0.00100	mmhos/cm	1	1051403	05/14/11	05/14/11	SM 2510B	

Summit Scientific

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

W01-8'
R105074-05 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **05/11/11 16:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1051402	05/14/11	05/14/11	8015 DRO	

Date Sampled: **05/11/11 16:45**

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: **05/11/11 16:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.017	0.0050	mg/kg	1	1051401	05/14/11	05/14/11	EPA 8260B	
Toluene	0.031	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.033	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/11/11 16:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		102 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	78.4-125		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/11/11 16:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.47	0.00100	mmhos/cm	1	1051403	05/14/11	05/14/11	SM 2510B	

Summit Scientific

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

W02-8'
R105074-06 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **05/11/11 17:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1051402	05/14/11	05/14/11	8015 DRO	

Date Sampled: **05/11/11 17:00**

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

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/11/11 17:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1051401	05/14/11	05/14/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/11/11 17:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		97.0 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.2 %	78.4-125		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/11/11 17:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.18	0.00100	mmhos/cm	1	1051403	05/14/11	05/14/11	SM 2510B	

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

B01-19.5'
R105074-07 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: **05/11/11 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	1051201	05/13/11	05/17/11	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: **05/11/11 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Nitrobenzene-d5		148 %	30-120		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		62.1 %	30-120		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		118 %	30-120		"	"	"	"	
Surrogate: Terphenyl-d14		78.0 %	30-120		"	"	"	"	

Total Petroleum Hydrocarbons by 8015

Date Sampled: **05/11/11 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1051402	05/14/11	05/14/11	8015 DRO	

Date Sampled: **05/11/11 10:27**

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

Summit Scientific

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

B01-19.5'
R105074-07 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 05/11/11 10:27

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1051401	05/14/11	05/14/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 05/11/11 10:27

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		97.4 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	78.4-125		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 05/11/11 10:27

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.83	0.00100	mmhos/cm	1	1051403	05/14/11	05/14/11	SM 2510B	

Date Sampled: 05/11/11 10:27

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.1		pH Units	"	1051404	05/14/11	05/14/11	EPA 9045B	

Colorado Analytical Laboratories

Date Sampled: 05/11/11 10:27

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	5.7	0.1	meq/L	1	1052011	05/19/11	05/20/11	USDA60 6 (20b)	

Summit Scientific

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

B01-19.5'
R105074-07 (Soil)

Summit Scientific

Colorado Analytical Laboratories

Date Sampled: **05/11/11 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Magnesium	4	0.1	meq/L	1	1052011	05/19/11	05/20/11	USDA60 6 (20b)	

Date Sampled: **05/11/11 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium	23.7	0.1	"	"	"	"	"	"	

Date Sampled: **05/11/11 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.59	0.05	mg/kg	"	"	"	"	SW6020	
Barium	280.4	0.1	"	"	"	"	"	"	
Cadmium	ND	0.1	"	"	"	"	"	"	
Copper	5.8	0.1	"	"	"	"	"	"	
Lead	7.1	0.1	"	"	"	"	"	"	
Nickel	12.8	0.1	"	"	"	"	"	"	
Selenium	ND	0.05	"	"	"	"	"	"	
Silver	ND	0.1	"	"	"	"	"	"	
Zinc	32.95	0.05	"	"	"	"	"	"	

Colorado Analytical Laboratories - Calculated Analytes

Date Sampled: **05/11/11 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	10.8	0.1	units	1	1052011	"	05/20/11	Calculation	

Colorado Analytical Laboratories - Total Metals by APHA/EPA Methods

Date Sampled: **05/11/11 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.05	mg/kg	1	1052011	"	05/20/11	EPA 7471A	

Summit Scientific

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

B01-19.5'
R105074-07 (Soil)

Summit Scientific

Colorado Analytical Laboratories - Total Metals by APHA/EPA Methods

Evergreen Analytical Laboratories

Date Sampled: **05/11/11 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium	5.4	0.99	mg/kg	1	1052008	05/18/11	05/20/11	EPA 6010A	

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

Date Sampled: **05/11/11 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.44	mg/kg	1	1052008	"	05/20/11	3060A/7196 A	

Evergreen Analytical - Trivalent Chromium, Calculated, Soil Basis

Date Sampled: **05/11/11 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	5	1.4	mg/kg	1	1052008	"	05/20/11	CalcCr+3	

Summit Scientific

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

B02-13'
R105074-08 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: 05/11/11 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	5.00	ug/kg	1	1051201	05/13/11	05/17/11	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	7.09	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

Date Sampled: 05/11/11 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Nitrobenzene-d5		164 %	30-120		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		62.1 %	30-120		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		128 %	30-120		"	"	"	"	
Surrogate: Terphenyl-d14		79.7 %	30-120		"	"	"	"	

Total Petroleum Hydrocarbons by 8015

Date Sampled: 05/11/11 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1051402	05/14/11	05/14/11	8015 DRO	

Date Sampled: 05/11/11 15:30

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

Summit Scientific

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

B02-13'
R105074-08 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 05/11/11 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	1051401	05/14/11	05/14/11	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.028	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 05/11/11 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	67.4-143		"	"	"	"	
Surrogate: Toluene-d8		101 %	77.3-114		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	78.4-125		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 05/11/11 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.26	0.00100	mmhos/cm	1	1051403	05/14/11	05/14/11	SM 2510B	

Date Sampled: 05/11/11 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.1		pH Units	"	1051404	05/14/11	05/14/11	EPA 9045B	

Colorado Analytical Laboratories

Date Sampled: 05/11/11 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	6	0.1	meq/L	1	1052011	05/19/11	05/20/11	USDA60 6 (20b)	

Summit Scientific

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

B02-13'
R105074-08 (Soil)

Summit Scientific

Colorado Analytical Laboratories

Date Sampled: **05/11/11 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Magnesium	4.5	0.1	meq/L	1	1052011	05/19/11	05/20/11	USDA60 6 (20b)	

Date Sampled: **05/11/11 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium	15	0.1	"	"	"	"	"	"	

Date Sampled: **05/11/11 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.66	0.05	mg/kg	"	"	"	"	SW6020	
Barium	237.3	0.1	"	"	"	"	"	"	
Cadmium	0.1	0.1	"	"	"	"	"	"	
Copper	6.7	0.1	"	"	"	"	"	"	
Lead	12.4	0.1	"	"	"	"	"	"	
Nickel	12.4	0.1	"	"	"	"	"	"	
Selenium	ND	0.05	"	"	"	"	"	"	
Silver	ND	0.1	"	"	"	"	"	"	
Zinc	29	0.05	"	"	"	"	"	"	

Colorado Analytical Laboratories - Calculated Analytes

Date Sampled: **05/11/11 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.5	0.1	units	1	1052011	"	05/20/11	Calculation	

Colorado Analytical Laboratories - Total Metals by APHA/EPA Methods

Date Sampled: **05/11/11 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.05	mg/kg	1	1052011	"	05/20/11	EPA 7471A	

Summit Scientific

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

B02-13'
R105074-08 (Soil)

Summit Scientific

Colorado Analytical Laboratories - Total Metals by APHA/EPA Methods

Evergreen Analytical Laboratories

Date Sampled: 05/11/11 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium	9.3	1	mg/kg	1	1052008	05/18/11	05/20/11	EPA 6010A	

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

Date Sampled: 05/11/11 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	0.43	0.43	mg/kg	1	1052008	"	05/20/11	3060A/7196 A	

Evergreen Analytical - Trivalent Chromium, Calculated, Soil Basis

Date Sampled: 05/11/11 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium+3 Calculated	8.9	1.4	mg/kg	1	1052008	"	05/20/11	CalcCr+3	

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

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

Summit Scientific

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

Batch 1051201 - EPA 3550A

Blank (1051201-BLK1)

Prepared: 05/12/11 Analyzed: 05/17/11

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	8740		"	6670	131	30-120				
Surrogate: 2-Fluorobiphenyl	3950		"	6670	59.2	30-120				
Surrogate: 2,4,6-Tribromophenol	4400		"	6670	66.0	30-120				
Surrogate: Terphenyl-d14	7160		"	6670	107	30-120				

Summit Scientific

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

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

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

Batch 1051201 - EPA 3550A

LCS (1051201-BS1)				Prepared: 05/12/11	Analyzed: 05/17/11					
Acenaphthene	25.4	5.00	ug/kg	33.3	76.2	30-120			30	
Anthracene	27.5	5.00	"	33.3	82.5	30-120			30	
Benzo (a) anthracene	26.4	5.00	"	33.3	79.1	30-120			30	
Benzo (b) fluoranthene	26.0	5.00	"	33.3	78.1	30-120			30	
Benzo (k) fluoranthene	27.0	5.00	"	33.3	81.0	30-120			30	
Benzo (a) pyrene	27.1	5.00	"	33.3	81.4	30-120			30	
Chrysene	28.2	5.00	"	33.3	84.7	30-120			30	
Dibenz (a,h) anthracene	31.4	10.0	"	33.3	94.2	30-120			30	
Fluoranthene	27.7	5.00	"	33.3	83.0	30-120			30	
Fluorene	27.2	5.00	"	33.3	81.6	30-120			30	
Indeno (1,2,3-cd) pyrene	25.6	10.0	"	33.3	76.9	30-120			30	
Naphthalene	23.9	5.00	"	33.3	71.6	30-120			30	
Pyrene	25.5	5.00	"	33.3	76.5	30-120			30	
Surrogate: Nitrobenzene-d5	8590		"	6670	129	30-120				
Surrogate: 2-Fluorobiphenyl	3670		"	6670	55.1	30-120				
Surrogate: 2,4,6-Tribromophenol	3620		"	6670	54.3	30-120				
Surrogate: Terphenyl-d14	5250		"	6670	78.8	30-120				

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

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

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

Batch 1051201 - EPA 3550A

Matrix Spike (1051201-MS1)	Source: R105051-03			Prepared: 05/12/11	Analyzed: 05/17/11						
Acenaphthene	26.1	5.00	ug/kg	33.3	ND	78.2	30-120			30	
Anthracene	26.3	5.00	"	33.3	ND	79.0	30-120			30	
Benzo (a) anthracene	26.7	5.00	"	33.3	ND	80.0	30-120			30	
Benzo (b) fluoranthene	31.8	5.00	"	33.3	ND	95.5	30-120			30	
Benzo (k) fluoranthene	32.1	5.00	"	33.3	ND	96.2	30-120			30	
Benzo (a) pyrene	28.0	5.00	"	33.3	ND	84.1	30-120			30	
Chrysene	28.0	5.00	"	33.3	ND	84.1	30-120			30	
Dibenz (a,h) anthracene	32.2	10.0	"	33.3	ND	96.7	30-120			30	
Fluoranthene	29.5	5.00	"	33.3	ND	88.6	30-120			30	
Fluorene	29.8	5.00	"	33.3	ND	89.5	30-120			30	
Indeno (1,2,3-cd) pyrene	27.6	10.0	"	33.3	ND	82.9	30-120			30	
Naphthalene	30.7	5.00	"	33.3	ND	92.1	30-120			30	
Pyrene	26.4	5.00	"	33.3	ND	79.2	30-120			30	
Surrogate: Nitrobenzene-d5	7780		"	6670		117	30-120				
Surrogate: 2-Fluorobiphenyl	3660		"	6670		54.9	30-120				
Surrogate: 2,4,6-Tribromophenol	5570		"	6670		83.5	30-120				
Surrogate: Terphenyl-d14	5220		"	6670		78.3	30-120				

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

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 1051201 - EPA 3550A

Matrix Spike Dup (1051201-MSD1)	Source: R105051-03			Prepared: 05/12/11		Analyzed: 05/17/11				
Acenaphthene	22.2	5.00	ug/kg	33.3	ND	66.5	30-120	16.1	30	
Anthracene	22.6	5.00	"	33.3	ND	67.9	30-120	15.1	30	
Benzo (a) anthracene	23.6	5.00	"	33.3	ND	70.7	30-120	12.3	30	
Benzo (b) fluoranthene	29.6	5.00	"	33.3	ND	88.9	30-120	7.11	30	
Benzo (k) fluoranthene	30.6	5.00	"	33.3	ND	91.9	30-120	4.53	30	
Benzo (a) pyrene	22.2	5.00	"	33.3	ND	66.5	30-120	23.3	30	
Chrysene	24.4	5.00	"	33.3	ND	73.2	30-120	13.9	30	
Dibenz (a,h) anthracene	29.0	10.0	"	33.3	ND	86.9	30-120	10.7	30	
Fluoranthene	25.2	5.00	"	33.3	ND	75.7	30-120	15.7	30	
Fluorene	23.4	5.00	"	33.3	ND	70.2	30-120	24.2	30	
Indeno (1,2,3-cd) pyrene	25.0	10.0	"	33.3	ND	74.9	30-120	10.1	30	
Naphthalene	27.8	5.00	"	33.3	ND	83.3	30-120	10.1	30	
Pyrene	23.7	5.00	"	33.3	ND	71.2	30-120	10.7	30	
<i>Surrogate: Nitrobenzene-d5</i>	<i>7020</i>		<i>"</i>	<i>6670</i>		<i>105</i>	<i>30-120</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>3330</i>		<i>"</i>	<i>6670</i>		<i>49.9</i>	<i>30-120</i>			
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>4480</i>		<i>"</i>	<i>6670</i>		<i>67.1</i>	<i>30-120</i>			
<i>Surrogate: Terphenyl-d14</i>	<i>4520</i>		<i>"</i>	<i>6670</i>		<i>67.8</i>	<i>30-120</i>			

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

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

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

Total Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1051402 - EPA 3550A

Blank (1051402-BLK1)

Prepared & Analyzed: 05/14/11

C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	13.4		"	12.5	107	88.8-124					

LCS (1051402-BS1)

Prepared & Analyzed: 05/14/11

C10-C28 (DRO)	549	50	mg/kg	501	110	81.4-129			9.26		
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LCS Dup (1051402-BSD1)

Prepared & Analyzed: 05/14/11

C10-C28 (DRO)	508	50	mg/kg	501	101	81.4-129	7.83		9.26		
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Matrix Spike (1051402-MS1)

Source: R105074-01

Prepared & Analyzed: 05/14/11

C10-C28 (DRO)	533	50	mg/kg	501	26.1	101	77.8-133		8.48		
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Matrix Spike Dup (1051402-MSD1)

Source: R105074-01

Prepared & Analyzed: 05/14/11

C10-C28 (DRO)	525	50	mg/kg	501	26.1	99.6	77.8-133	1.38	8.48		
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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

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

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

Batch 1051401 - EPA 5030 Soil MS

Blank (1051401-BLK1)

Prepared & Analyzed: 05/14/11

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.6</i>	<i>67.4-143</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.4</i>	<i>77.3-114</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0395</i>		<i>"</i>	<i>0.0400</i>		<i>98.8</i>	<i>78.4-125</i>			

LCS (1051401-BS1)

Prepared & Analyzed: 05/14/11

Benzene	0.0973	0.0050	mg/kg	0.100		97.3	61-139		11.1	
Toluene	0.0951	0.0050	"	0.100		95.1	64-132		10.9	
Ethylbenzene	0.106	0.0050	"	0.100		106	68.7-135		20	
m,p-Xylene	0.192	0.010	"	0.200		95.8	70.4-129		20	
o-Xylene	0.0904	0.0050	"	0.100		90.4	66.9-126		20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0399</i>		<i>"</i>	<i>0.0400</i>		<i>99.7</i>	<i>67.4-143</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.6</i>	<i>77.3-114</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0397</i>		<i>"</i>	<i>0.0400</i>		<i>99.2</i>	<i>78.4-125</i>			

LCS Dup (1051401-BSD1)

Prepared & Analyzed: 05/14/11

Benzene	0.0958	0.0050	mg/kg	0.100		95.8	61-139	1.62	11.1	
Toluene	0.0935	0.0050	"	0.100		93.5	64-132	1.62	10.9	
Ethylbenzene	0.105	0.0050	"	0.100		105	68.7-135	1.25	20	
m,p-Xylene	0.190	0.010	"	0.200		95.1	70.4-129	0.738	20	
o-Xylene	0.0892	0.0050	"	0.100		89.2	66.9-126	1.34	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0395</i>		<i>"</i>	<i>0.0400</i>		<i>98.8</i>	<i>67.4-143</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0386</i>		<i>"</i>	<i>0.0400</i>		<i>96.5</i>	<i>77.3-114</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0381</i>		<i>"</i>	<i>0.0400</i>		<i>95.3</i>	<i>78.4-125</i>			

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

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

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

Batch 1051401 - EPA 5030 Soil MS

Matrix Spike (1051401-MS1)	Source: R105074-01			Prepared & Analyzed: 05/14/11							
Benzene	0.0968	0.0050	mg/kg	0.100	ND	96.8	42.9-137				17.9
Toluene	0.0936	0.0050	"	0.100	ND	93.6	42.6-130				11.9
Ethylbenzene	0.104	0.0050	"	0.100	ND	104	39-133				20
m,p-Xylene	0.188	0.010	"	0.200	ND	94.2	34.7-134				20
o-Xylene	0.0895	0.0050	"	0.100	ND	89.5	41.3-126				20
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0446</i>		<i>"</i>	<i>0.0400</i>		<i>111</i>	<i>67.4-143</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0389</i>		<i>"</i>	<i>0.0400</i>		<i>97.3</i>	<i>77.3-114</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.4</i>	<i>78.4-125</i>				

Matrix Spike Dup (1051401-MSD1)	Source: R105074-01			Prepared & Analyzed: 05/14/11							
Benzene	0.0988	0.0050	mg/kg	0.100	ND	98.8	42.9-137	2.12			17.9
Toluene	0.0976	0.0050	"	0.100	ND	97.6	42.6-130	4.24			11.9
Ethylbenzene	0.102	0.0050	"	0.100	ND	102	39-133	1.71			20
m,p-Xylene	0.190	0.010	"	0.200	ND	95.1	34.7-134	0.887			20
o-Xylene	0.0900	0.0050	"	0.100	ND	90.0	41.3-126	0.568			20
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0451</i>		<i>"</i>	<i>0.0400</i>		<i>113</i>	<i>67.4-143</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>77.3-114</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0381</i>		<i>"</i>	<i>0.0400</i>		<i>95.2</i>	<i>78.4-125</i>				

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
 Project Manager: Brian Dodek

Reported:
 05/20/11 11:22

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

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

Batch 1051403 - General Preparation

Duplicate (1051403-DUP1)	Source: R105074-01			Prepared & Analyzed: 05/14/11							
Specific Conductance (EC)	3.33	0.00100	mmhos/cm		3.36				0.852	20	

Batch 1051404 - General Preparation

Duplicate (1051404-DUP1)	Source: R105074-07			Prepared & Analyzed: 05/14/11							
pH	9.1		pH Units		9.1				0.329	20	

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:22

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

Summit Scientific

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Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 20, 2011

Brian Dodek
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: BBC - Mamm Creek 13-33

Enclosed are the results of analyses for samples received by Summit Scientific on 05/14/11 09:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'PS', with a long horizontal flourish extending to the right.

Paul Shrewsbury For Ben Shrewsbury
President / Laboratory Director



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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BG01-0.5'	R105075-01	Soil	05/13/11 11:00	05/14/11 09:30
BG02-0.5'	R105075-02	Soil	05/13/11 11:10	05/14/11 09:30
BG03-0.5'	R105075-03	Soil	05/13/11 11:20	05/14/11 09:30
BG04-0.5'	R105075-04	Soil	05/13/11 11:30	05/14/11 09:30

Summit Scientific

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

Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:23

BG01-0.5'
R105075-01 (Soil)

Summit Scientific

Colorado Analytical Laboratories

Date Sampled: **05/13/11 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.78	0.05	mg/kg	1	1052012	05/19/11	05/20/11	EPA 6020	

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 - Mamm Creek 13-33

Project Number: 0273-11016
 Project Manager: Brian Dodek

Reported:
 05/20/11 11:23

BG02-0.5'
R105075-02 (Soil)

Summit Scientific

Colorado Analytical Laboratories

Date Sampled: **05/13/11 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.38	0.05	mg/kg	1	1052012	05/19/11	05/20/11	EPA 6020	

Summit Scientific

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Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
 Project Manager: Brian Dodek

Reported:
 05/20/11 11:23

BG03-0.5'
R105075-03 (Soil)

Summit Scientific

Colorado Analytical Laboratories

Date Sampled: **05/13/11 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.84	0.05	mg/kg	1	1052012	05/19/11	05/20/11	EPA 6020	

Summit Scientific

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Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
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Reported:
05/20/11 11:23

BG04-0.5'
R105075-04 (Soil)

Summit Scientific

Colorado Analytical Laboratories

Date Sampled: **05/13/11 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.36	0.05	mg/kg	1	1052012	05/19/11	05/20/11	EPA 6020	

Summit Scientific

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Reported:
05/20/11 11:23

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

Summit Scientific

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LT Environmental, Inc.
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Project: BBC - Mamm Creek 13-33

Project Number: 0273-11016
Project Manager: Brian Dodek

Reported:
05/20/11 11:23

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

Summit Scientific

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