

State of Colorado  
Oil and Gas Conservation Commission

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



## SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

1. OGCC Operator Number: 10071	4. Contact Name: Scott Ghan	Complete the Attachment Checklist OP OGCC
2. Name of Operator: Bill Barrett Corporation	5. Phone: 970-867-1959	
3. Address: 112 Red Feather Trail	6. Fax: 970-876-0981	
City: Silt State: CO Zip: 81652		
5. API Number 05-033-06146	OGCC Facility ID Number: 522190	Survey Plat
6. Well/Facility Name: Neely	7. Well/Facility Number: 13H-18-39-17	Directional Survey
8. Location (Qtr/Sec, Twp, Rng, Meridian): SWSW 18 39N 17W N PM		Surface Eqpm Diagram
9. County: DOLORES	10. Field Name: SOLO LOBO	Technical Info Page
11. Federal, Indian or State Lease Number:		Other

## General Notice

<input type="checkbox"/> CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)	
Change of Surface Footage from Exterior Section Lines:	<input type="checkbox"/> FNU/SL <input type="checkbox"/> FEL/FWL
Change of Surface Footage to Exterior Section Lines:	<input type="checkbox"/> <input type="checkbox"/>
Change of Bottomhole Footage from Exterior Section Lines:	<input type="checkbox"/> <input type="checkbox"/>
Change of Bottomhole Footage to Exterior Section Lines:	<input type="checkbox"/> <input type="checkbox"/>
Bottomhole location Qtr/Sec, Twp, Rng, Mer	attach directional survey
Latitude	Distance to nearest property line
Longitude	Distance to nearest bldg, public rd, utility or RR
Ground Elevation	Distance to nearest lease line
	Is location in a High Density Area (rule 603b)? Yes/No
	Distance to nearest well same formation
	Surface owner consultation date:
GPS DATA:	
Date of Measurement	PDOP Reading
	Instrument Operator's Name
<input type="checkbox"/> CHANGE SPACING UNIT	
Formation	Formation Code
Spacing order number	Unit Acreage
	Unit configuration
<input type="checkbox"/> Remove from surface bond	
Signed surface use agreement attached	
<input type="checkbox"/> CHANGE OF OPERATOR (prior to drilling):	
Effective Date:	
Plugging Bond: <input type="checkbox"/> Blanket <input type="checkbox"/> Individual	
<input type="checkbox"/> CHANGE WELL NAME	
From:	NUMBER
To:	
Effective Date:	
<input type="checkbox"/> ABANDONED LOCATION:	
Was location ever built? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Is site ready for inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Date Ready for Inspection:	
<input type="checkbox"/> NOTICE OF CONTINUED SHUT IN STATUS	
Date well shut in or temporarily abandoned:	
Has Production Equipment been removed from site? <input type="checkbox"/> Yes <input type="checkbox"/> No	
MIT required if shut in longer than two years. Date of last MIT	
<input type="checkbox"/> SPUD DATE:	
<input type="checkbox"/> REQUEST FOR CONFIDENTIAL STATUS (6 mos from date casing set)	
<input type="checkbox"/> SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK	
*submit cbl and cement job summaries	
Method used	Cementing tool setting/perf depth
Cement volume	Cement top
Cement bottom	Date
<input type="checkbox"/> RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004.	
Final reclamation will commence on approximately	
<input type="checkbox"/> Final reclamation is completed and site is ready for inspection.	

## Technical Engineering/Environmental Notice

<input type="checkbox"/> Notice of Intent		<input type="checkbox"/> Report of Work Done	
Approximate Start Date:		Date Work Completed:	
Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)			
<input type="checkbox"/> Intent to Recomplete (submit form 2)	<input type="checkbox"/> Request to Vent or Flare	<input type="checkbox"/> E&P Waste Disposal	
<input type="checkbox"/> Change Drilling Plans	<input type="checkbox"/> Repair Well	<input type="checkbox"/> Beneficial Reuse of E&P Waste	
<input type="checkbox"/> Gross Interval Changed?	<input checked="" type="checkbox"/> Rule 502 variance requested	<input type="checkbox"/> Status Update/Change of Remediation Plans	
<input type="checkbox"/> Casing/Cementing Program Change	<input type="checkbox"/> Other:	for Spills and Releases	

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

Signed: Scott Ghan Date: 1/26/2011 Email: sgghan@billbarrettcorp.com

Print Name: Scott Ghan Title: Environmental Health & Safety Coordinator

OGCC Approved: [Signature] Title: Env. Sup. Date: 5/12/11

CONDITIONS OF APPROVAL IF ANY:

Per mty w/ CDPHE 5/12/11

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

1. OGCC Operator Number:	#10071	API Number:	05-033-06146
2. Name of Operator:	Bill Barrett Corporation	OGCC Facility ID #	
3. Well/Facility Name:	Neely	Well/Facility Number:	13H-18-39-17
4. Location (QtrQtr, Sec, Twp, Rng, Meridian):	SWSW 18 39N 17W N PM		

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5. **DESCRIBE PROPOSED OR COMPLETED OPERATIONS**

Bill Barrett Corporation (BBC) respectfully requests a variance pursuant to Rule 502 in consideration of arsenic concentrations that exceed COGCC Table 910-1 concentration levels and background concentrations. BBC has conducted extensive mixing with native fill in an effort to stabilize the cuttings for burial as well as reduce metals concentrations to meet Table 910-1 levels. Currently, the arsenic concentration in the mixed cuttings is 2.99 mg/kg, while the background concentration is as high as 2.37 mg/kg. This results in a mixed cuttings arsenic concentration exceedance of only 0.62 mg/kg. Given the elevated background arsenic concentrations (2.37 mg/kg) in this area, and the fact that the cuttings mixture is buried beneath a minimum of three feet of native fill, the remaining level of arsenic in the buried cuttings does not represent a significant risk to human health or the environment.

Subsequent mixing of the cuttings will inevitably delay closure of the pit as well as produce a surplus of mixed soil at the site, which will need to be hauled off for reuse on other pads or hauled for disposal at a high cost. Please see the attached letter for details regarding pit closure activities and recommendation for a Form 4 variance request.



January 25, 2011

Mr. Scott Ghan  
Bill Barrett Corporation  
112 Red Feather Trail  
Silt, CO 81652

**Re: Documentation of Field Activities and Sample Results for the  
Neely 13H-18 Pad Pit Closure (05-033-06146)  
SWSW 18 T39N R17W N PM**

Dear Mr. Ghan:

LT Environmental, Inc. (LTE) was contracted by Bill Barrett Corporation (BBC) to provide environmental sampling activities at the above-referenced site. The scope of work consisted of drill cuttings sampling, background soil sampling, laboratory analysis, and documentation of field activities.

On April 1, 2009, an LTE representative collected a drill cuttings sample prior to pit closure activities. The drilling/completions pit consisted of drill cuttings and a de minimus amount of water-based bentonitic drilling mud used to extract drill cuttings during the drilling process. LTE did not observe any discoloration sheen or odor that would indicate the pit had been adversely impacted by drilling activities.

Cuttings samples were collected from four separate locations in the pit and composited into one sample (Neely 13H-18 Composite). The drill cuttings sample was submitted to a contract laboratory for analysis of the Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 metals by Environmental Protection Agency (EPA) Method 6010B, electrical conductivity (EC) by United States Department of Agriculture (USDA) handbook saturated paste method, pH by USDA handbook saturated paste method, sodium adsorption ratio (SAR) by calculation, benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8260B, and total petroleum hydrocarbons (TPH) by EPA Modified Method 8015. LTE also collected a representative background soil sample (Neely 13H-8 BG) from beyond the pad surface that was submitted for analysis of COGCC Table 910-1 metals, EC, pH, and SAR.

Laboratory analytical results indicated that BTEX, TPH, COGCC Table 910-1 metals concentrations (except for arsenic) and pH in the drill cuttings sample were in compliance with COGCC Table 910-1 concentration levels. Arsenic, EC, and SAR concentrations exceeded COGCC Table 910-1 concentration levels.

According to BBC personnel, the sampled drill cuttings were mixed with native soil and buried at a minimum of 3-feet below ground surface and 3-feet above the static water level. The 3-foot soil cap will be composed of native soils from the area. 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. Although EC, pH, and SAR are parameters used to ensure proper reclamation of disturbed areas, limited exceedances of these parameters will not likely affect reclamation, as the mixed drill cuttings are to be buried below the vegetative root zone.

Following mixing activities, LTE collected a composite drill cuttings sample on August 12, 2010. The second drill cuttings sample (Neely 13H-8 COMP) was submitted for analysis of arsenic. Laboratory analytical results indicated the arsenic concentration for the second drill cuttings sample was 2.99 mg/kg, which exceeds the background arsenic concentration by only 0.62 mg/kg.

LTE also collected six background soil samples (Neely 13H-18 BG01, BG02, BG03, BG04, FILL-1, and FILL-2) to determine the variability of the background arsenic concentrations. Background samples Neely 13H-18 FILL-1 and FILL-2 were collected from the two remaining locations of potential backfill material.

The background arsenic level measured in a sample taken from native materials that could be used to mix with the drill cuttings in an attempt to further lower the arsenic concentration is only 0.62 mg/kg less than the mixed cuttings arsenic concentration. As the concentrations observed in the mixed cuttings and native sample differ by only 21%, additional mixing is unlikely to significantly lower the arsenic concentration of the cuttings.

According to BBC personnel, the soil mixing activities have resulted in a mixed cuttings volume that is equal to that of the pit. As a result of this space limitation, additional mixing activities are not a viable option. Due to high trucking and soil disposal costs and the low differential in arsenic concentrations between the cuttings mixture and native background samples, variability in soil sampling, and the potential for up to a 20% laboratory error, LTE believes that the arsenic concentration documented in the mixed cuttings is within an acceptable range of naturally-occurring background values and likely does not represent a significant change in risk to human health or the environment. As such, LTE recommends BBC request a variance from the COGCC to allow the cuttings to be buried in place.

A generalized depiction of the reserve pit and sample locations is shown on the attached Figure 1. The soil sample analytical results are summarized in Table 1. A copy of the laboratory analytical reports is included as Appendix A.

Please call us at (970) 285-9985 if you have any questions regarding this letter report or require additional information.



Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in black ink, appearing to read 'Asher' followed by a stylized 'W'.

Asher Weinberg  
Staff Environmental Scientist

A handwritten signature in black ink, appearing to read 'Brian Dodek' in a cursive style.

Brian Dodek, P.G.  
Client Manager / Project Geologist

Attachments (3):

Table 1 – Soil Analytical Results

Figure 1 – Site Sketch

Attachment A – Laboratory Analytical Reports

## TABLE

TABLE 1

SOIL ANALYTICAL RESULTS

NEELY 13H-18

DOLORES COUNTY, COLORADO

BILL BARRETT CORPORATION

PARAMETER	COGCC STANDARD	UNITS	NEELY 13H-18 BG	NEELY 13H-18 Composite	NEELY 13H-18 COMP	NEELY 13H-18 BG01	NEELY 13H-18 BG02	NEELY 13H-18 BG03	NEELY 13H-18 BG04	NEELY 13H-19 FILL-1	NEELY 13H-18 FILL-2
Sample Date			4/1/2009	4/1/2009	8/12/2010	8/12/2010	8/12/2010	8/12/2010	8/12/2010	8/25/2010	8/25/2010
Sample Type			Background	Drill Cuttings	Drill Cuttings	Background	Background	Background	Background	Background	Background
Arsenic	0.39	mg/kg	<10.0	22.5	2.99	1.27	0.42	1.31	1.3	2.37	1.45
Barium	15,000	mg/kg	167	2,740	--	--	--	--	--	--	--
Boron		mg/kg	19.0	27.2	--	--	--	--	--	--	--
Cadmium	70	mg/kg	<1.0	<1.0	--	--	--	--	--	--	--
Chromium	120,000	mg/kg	14.4	43.4	--	--	--	--	--	--	--
Copper	3,100	mg/kg	9.7	10.4	--	--	--	--	--	--	--
Lead	400	mg/kg	10.0	<5.0	--	--	--	--	--	--	--
Mercury	23	mg/kg	<0.1	<0.1	--	--	--	--	--	--	--
Nickel	1,600	mg/kg	12.2	26.3	--	--	--	--	--	--	--
Selenium	390	mg/kg	<20.0	<20.0	--	--	--	--	--	--	--
Silver	390	mg/kg	<1.0	<1.0	--	--	--	--	--	--	--
Zinc	23,000	mg/kg	40.4	94.4	--	--	--	--	--	--	--
EC	4.0	mmhos/cm	0.55	6.47	--	--	--	--	--	--	--
pH	6 - 9	SU	7.48	8.88	--	--	--	--	--	--	--
Calcium		meq/L	3.46	9.03	--	--	--	--	--	--	--
Magnesium		meq/L	1.06	1.86	--	--	--	--	--	--	--
Sodium		meq/L	1.20	36.5	--	--	--	--	--	--	--
SAR	12	unitless	0.80	15.6	--	--	--	--	--	--	--
Benzene	0.17	mg/kg	--	0.096	--	--	--	--	--	--	--
Toluene	85	mg/kg	--	0.317	--	--	--	--	--	--	--
Ethylbenzene	100	mg/kg	--	<0.050	--	--	--	--	--	--	--
Xylenes (total)	175	mg/kg	--	3.01	--	--	--	--	--	--	--
TPH-GRO		mg/kg	--	19.1	--	--	--	--	--	--	--
TPH-DRO		mg/kg	--	324	--	--	--	--	--	--	--
TPH-DRO Extended		mg/kg	--	<10.0	--	--	--	--	--	--	--
Total TPH	500	mg/kg	--	343.1	--	--	--	--	--	--	--

NOTES

meq/L - milliequivalents per liter

mg/kg - milligrams per kilogram

mmhos/cm - millimhos per centimeter in saturated paste extract

SU - standard unit on saturated paste

EC - electrical conductivity

SAR - sodium adsorption ratio

TPH-DRO - total petroleum hydrocarbons diesel range organics

TPH-DRO Extended - total petroleum hydrocarbons oil range organics

TPH-GRO - total petroleum hydrocarbons gasoline range organics

Total TPH - combination of TPH-DRO, TPH-DRO Extended, and TPH-GRO

< - less than the stated reporting limit

-- - not analyzed

**BOLD** - indicates result is above the Colorado Oil and Gas Conservation Commission Standard

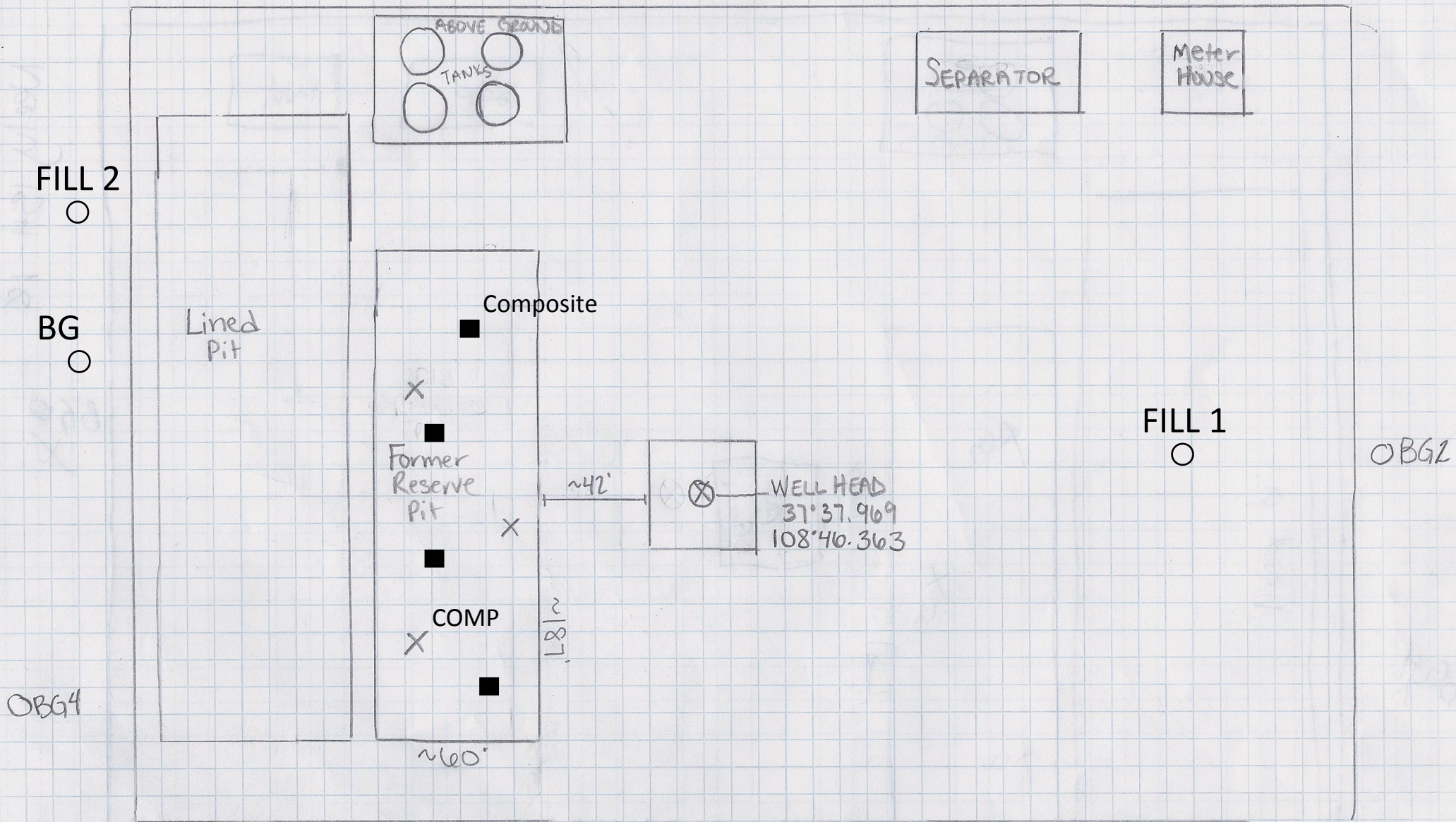
**FIGURE**





← N

BG10



### Legend:

- x - Sample location for Composite
- o - Background Sample location
- - Sample location for composite (4/1/09)

Neely 13H-18

Bill Barrett Corp. Cuttings Sampling  
8-12-2010  
Drawn by B. Neely BBL1010



**APPENDIX A**  
**LABORATORY ANALYTICAL REPORTS**



**Green Analytical Laboratories**  
**75 Suttle Street**  
**Durango, CO 81303**

LT Environmental  
PO Box 874  
Bayfield, CO 81122  
Attention: Travis Laverty

**PROJECT NAME:** Barrett Soil  
**PROJECT NUMBER:** BBC0901  
**SAMPLE I.D.:** Neely 13H-18 BG

**GAL I.D.:** 904-003-03

Date Received: 04/01/09

Date Reported: 04/21/09

QC Batches:

Sample Date: 04/01/09

Sample Matrix: Soil

Units: mg/kg

## RCRA Metals

### RESULTS

PARAMETER	METHOD	REPORT		DILUTION	DATE	
		LIMIT	RESULT		ANALYZED	ANALYST
Arsenic	6010B	10.0	<10.0	100	04/03/09	jm
Barium	6010B	1.0	167	100	04/03/09	jm
Boron	6010B	10.0	19.0	100	04/03/09	jm
Cadmium	6010B	1.0	<1.0	100	04/03/09	jm
Chromium	6010B	1.0	14.4	100	04/03/09	jm
Copper	6010B	2.0	9.7	100	04/03/09	jm
Lead	6010B	5.0	10.0	100	04/03/09	jm
Mercury	7471A	0.1	<0.1	500	04/06/09	jm
Nickel	6010B	2.0	12.2	100	04/03/09	jm
Selenium	6010B	20.0	<20.0	100	04/03/09	jm
Silver	6010B	1.0	<1.0	100	04/03/09	jm
Zinc	6010B	5.0	40.4	100	04/03/09	jm

**Green Analytical Laboratories**  
**75 Suttle Street**  
**Durango, CO 81303**

LT Environmental  
PO Box 874  
Bayfield, CO 81122  
Attention: Travis Lavery

**PROJECT NAME:** Barrett Soil  
**PROJECT NUMBER:** BBC0901  
**SAMPLE I.D.:** Neely 13H-18 BG

**GAL I.D.:** 904-003-03

Date Received: 04/01/09

Date Reported: 04/21/09

QC Batches:

Sample Date: 04/01/09

Sample Matrix: Soil

## Laboratory Report

### **RESULTS**

REPORT				
PARAMETER	METHOD	LIMIT	RESULT	UNITS
EC	2510B	1.0	0.55	nmho/cm on Sat. Paste Ex
pH	150.1	NA	7.48	SU on Sat. Paste
Calcium	200.7	0.5	3.46	meq/L
Magnesium	200.7	0.5	1.06	meq/L
Sodium	200.7	0.5	1.20	meq/L
SAR	Calc.		0.80	

Green Analytical Laboratories  
75 Suttle Street  
Durango, CO 81303

LT Environmental  
PO Box 874  
Bayfield, CO 81122  
Attention: Travis Lavery

**PROJECT NAME:** Barrett Soil  
**PROJECT NUMBER:** BBC0901  
**SAMPLE I.D.:** Neely 13H-18 BG

**GAL I.D.:** 904-003-03

Date Received: 04/01/09

Date Reported: 04/21/09

QC Batches:

Sample Date: 04/01/09

Sample Matrix: Soil

## Petroleum Hydrocarbons

### RESULTS

PARAMETER	METHOD	REPORT		DIL	UNITS
		LIMIT	RESULT		
TPHGRO	8015	10	Attached	1	mg/kg
TPHDRO	8015	10	Attached	1	mg/kg
TPHDROExtended	8015	10	Attached	1	mg/kg

**Green Analytical Laboratories**  
**75 Suttle Street**  
**Durango, CO 81303**

LT Environmental  
PO Box 874  
Bayfield, CO 81122  
Attention: Travis Laverty

**PROJECT NAME:** Barrett Soil  
**PROJECT NUMBER:** BBC0901  
**SAMPLE I.D.:** Neely 13H-18 Composite

**GAL I.D.:** 904-003-04

Date Received: 04/01/09

Date Reported: 04/21/09

QC Batches:

Sample Date: 04/01/09

Sample Matrix: Soil

Units: mg/kg

## RCRA Metals

### **RESULTS**

PARAMETER	METHOD	REPORT		DILUTION	DATE	
		LIMIT	RESULT		ANALYZED	ANALYST
Arsenic	6010B	10.0	22.5	100	04/03/09	jm
Barium	6010B	1.0	2740	100	04/03/09	jm
Boron	6010B	10.0	27.2	100	04/03/09	jm
Cadmium	6010B	1.0	<1.0	100	04/03/09	jm
Chromium	6010B	1.0	43.4	100	04/03/09	jm
Copper	6010B	2.0	10.4	100	04/03/09	jm
Lead	6010B	5.0	<5.0	100	04/03/09	jm
Mercury	7471A	0.1	<0.1	500	04/06/09	jm
Nickel	6010B	2.0	26.3	100	04/03/09	jm
Selenium	6010B	20.0	<20.0	100	04/03/09	jm
Silver	6010B	1.0	<1.0	100	04/03/09	jm
Zinc	6010B	5.0	94.4	100	04/03/09	jm

**Green Analytical Laboratories**  
**75 Suttle Street**  
**Durango, CO 81303**

LT Environmental  
PO Box 874  
Bayfield, CO 81122  
Attention: Travis Lavery

**PROJECT NAME:** Barrett Soil  
**PROJECT NUMBER:** BBC0901  
**SAMPLE I.D.:** Neely 13H-18 Composite

**GAL I.D.:** 904-003-04

Date Received: 04/01/09

Date Reported: 04/21/09

QC Batches:

Sample Date: 04/01/09

Sample Matrix: Soil

## Laboratory Report

### **RESULTS**

REPORT				
PARAMETER	METHOD	LIMIT	RESULT	UNITS
EC	2510B	1.0	6.47	nmho/cm on Sat. Paste Ex
pH	150.1	NA	8.88	SU on Sat. Paste
Calcium	200.7	0.5	9.03	meq/L
Magnesium	200.7	0.5	1.86	meq/L
Sodium	200.7	0.5	36.5	meq/L
SAR	Calc.		15.6	

**Green Analytical Laboratories**  
**75 Suttle Street**  
**Durango, CO 81303**

LT Environmental  
PO Box 874  
Bayfield, CO 81122  
Attention: Travis Lavery

**PROJECT NAME:** Barrett Soil  
**PROJECT NUMBER:** BBC0901  
**SAMPLE I.D.:** Neely 13H-18 Composite

**GAL I.D.:** 904-003-04

Date Received: 04/01/09

Date Reported: 04/21/09

QC Batches:

Sample Date: 04/01/09

Sample Matrix: Soil

## Petroleum Hydrocarbons

### **RESULTS**

PARAMETER	METHOD	REPORT		DIL	UNITS
		LIMIT	RESULT		
TPHGRO	8015	10	Attached	1	mg/kg
TPHDRO	8015	10	Attached	1	mg/kg
TPHDROExtended	8015	10	Attached	1	mg/kg





# ARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
GREEN ANALYTICAL LABORATORIES, INC.  
ATTN: DEBBIE ZUFELT  
75 SUTTLE STREET  
DURANGO, CO 81303

Receiving Date: 04/02/09  
Reporting Date: 05/13/09  
Project Number: 904-003- 02, 04\*  
Project Name: LTE  
Project Location: NOT GIVEN

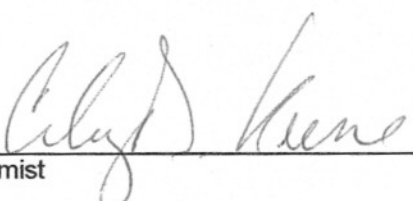
Sampling Date: 04/01/09\*  
Sample Type: SOIL/SEDIMENT  
Sample Condition: COOL & INTACT  
Sample Received By: CK  
Analyzed By: ZL

LAB NO.	SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL- BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE:		05/13/09	05/13/09	05/13/09	05/13/09
H17182-2	GRAY 13H-27 COMP.	<0.050	0.186	0.081	1.23
H17182-4	NEELEY 13H-18 COMP.	0.096	0.317	<0.050	3.01
Quality Control		0.053	0.049	0.051	0.159
True Value QC		0.050	0.050	0.050	0.150
% Recovery		106	98.0	102	106
Relative Percent Difference		1.8	1.9	11.5	1.2

METHODS: BTEX - SW-846 8021B.

\*Analyzed outside the EPA recommended hold time of 14 days.

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
AND TOTAL XYLENES.

  
Chemist

  
Date

H17182 BTEX GAL

PLEASE NOTE: **Liability and Damages.** Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



# ARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
GREEN ANALYTICAL LABORATORIES, INC.  
ATTN: DEBBIE ZUFELT  
75 SUTTLE STREET  
DURANGO, CO 81303

Receiving Date: 04/02/09  
Reporting Date: 05/05/09\*  
Project Number: 904-003- 02, 04\*  
Project Name: LTE  
Project Location: NOT GIVEN

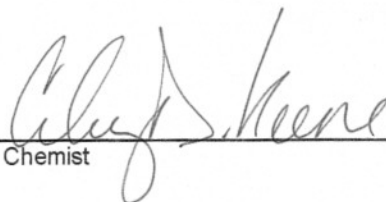
Sampling Date: 04/01/09  
Sample Type: SOIL/SEDIMENT  
Sample Condition: COOL & INTACT  
Sample Received By: CK  
Analyzed By: AB

LAB NO.	SAMPLE ID	GRO (C <sub>6</sub> -C <sub>10</sub> ) (mg/kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/kg)	DRO EXT. (>C <sub>28</sub> -C <sub>35</sub> ) (mg/kg)
---------	-----------	--	--	---

ANALYSIS DATE:		04/04/09	04/04/09	04/04/09
H17182-2	GRAY 13H-27 COMP.	11.3	90.8	12.3
H17182-4	NEELEY 13H-18 COMP.	19.1	324	<10.0
Quality Control		551	544	-
True Value QC		500	500	-
% Recovery		110	109	-
Relative Percent Difference		4.7	10.4	-

METHODS: TPH GRO & DRO - EPA SW-846 8015 M

\*Revised Report

  
\_\_\_\_\_  
Chemist

05/05/09  
\_\_\_\_\_  
Date

H17182 TPHE GAL

PLEASE NOTE: **Liability and Damages.** Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



## CHAIN OF CUSTODY RECORD

Page \_\_\_\_ of \_\_\_\_

Client: GREEN ANALYTICAL  
Contact: DEBBIE ZUFELT  
Address: 75 SUTTLE ST  
DURANGO, CO 81303  
Phone Number: 970-247-4220  
FAX Number: 970-247-4227

### NOTES:

- 1) Ensure proper container packaging.
- 2) Ship samples promptly following collection.
- 3) Designate Sample Reject Disposition.

PO# GA09-071Project Name: LTE

### Table 1. - Matrix Type

1 = Surface Water, 2 = Ground Water  
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil  
6 = Waste, 7 = Other (Specify) \_\_\_\_\_

FOR GAL USE ONLY

GAL JOB #  
\_\_\_\_\_

Samplers Signature: \_\_\_\_\_

**PLEASE CALL WITH ANY QUESTIONS**

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227		Analyses Required										Comments						
Address: 75 Suttle Street, Durango, CO 81303																		
Sample ID	Collection		Miscellaneous			Preservative(s)												
	Date	Time	Collected by: (Init.)	Matrix Type From Table 1	No. of Containers	Sample Filtered ? Y/N	Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)						
H17182-																		
1. Gray 13H-27-BG	4-1-09	0845	TL	3	1		✓						full TPH 8015	✓	✓			904-003-01
2. Gray 13H-27 Comp		0850					✓									X		-02
3. Neely 13H-18-BG		0940																-03
4. Neely 13H-18 Comp	✓	0945	✓	✓	✓		✓						✓	✓	✓	X		-04
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		

Relinquished by: <u>Debbie Zufelt</u>	Date: <u>4-1-09</u>	Time: <u>1600</u>	Received by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: <u>Cheryl Keene</u>	Date: <u>4/2/09</u>	Time: <u>10:30</u>

\* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

\* Report revised as per client. see e-mail. dk 5/5/09  
Analyses added client aware of hold time expiration.

C&I 7.0°C #26

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

August 19, 2010

Brian Dodek  
LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada, CO 80003  
RE: BBC - Neeley 13H-18

Enclosed are the results of analyses for samples received by Summit Scientific on 08/16/10 10:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Paul Shrewsbury For Ben Shrewsbury  
President / Laboratory Director



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

Project: BBC - Neeley 13H-18

Project Number: BBC 1016.01  
Project Manager: Brian Dodek

**Reported:**  
08/19/10 10:38

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Neeley 13H-18 Comp	R008070-01	Soil	08/12/10 13:48	08/16/10 10:30
Neeley 13H-18 BG01	R008070-02	Soil	08/12/10 13:53	08/16/10 10:30
Neeley 13H-18 BG02	R008070-03	Soil	08/12/10 13:56	08/16/10 10:30
Neeley 13H-18 BG03	R008070-04	Soil	08/12/10 14:03	08/16/10 10:30
Neeley 13H-18 BG04	R008070-05	Soil	08/12/10 14:06	08/16/10 10:30

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 - Neeley 13H-18

Project Number: BBC 1016.01

Project Manager: Brian Dodek

**Reported:**

08/19/10 10:38

Summit Scientific

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

Client:	LT Environmental Inc.		
Address:	4600 West 60th Ave.		
City/State/Zip:	Arvada, CO 80003		
Phone:	303-433-9788	Fax:	303-
Sampler Name:	Brooke Hede		

Project Manager:	Brian Dodek
E-Mail:	bdodek@lten
Project Name:	Neeley 13H-1
Project Number:	

Page 1 of 1

2008070

Preservative						Matrix		Analyze For:								Special Instructions	
HCl	HNO <sub>3</sub>	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	Arsenic (6020B)										
Sample Description	Date Sampled	Time Sampled	Number of Containers														
Neeley 3H-18 Comp	8/12/2010	13:48	1		X		X		X								
Neeley 3H-18 BG01	8/12/2010	13:53	1		X		X		X								
Neeley 3H-18 BG02	8/12/2010	13:50	1		X		X		X								
Neeley 3H-18 BG03	8/12/2010	14:03	1		X		X		X								
Neeley 3H-18 BG04	8/12/2010	14:00	1		X		X		X								
Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)				Notes:									
K. Zourek	8/13/2010 15:00	[Signature]	8-16-10 10:30	Same Day				72 Hours									5 day TAT Per Co. Anal.
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:													
				Temperature Upon Receipt:				Intact:	Yes	No							
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:														

[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 - Neeley 13H-18  
Project Number: BBC 1016.01  
Project Manager: Brian Dodek

**Reported:**  
08/19/10 10:38

**Neeley 13H-18 Comp  
R008070-01 (Soil)**

**Summit Scientific**

**Colorado Analytical Laboratories**

Date Sampled: **08/12/10 13:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	<b>2.99</b>	0.05		mg/kg	1	0081901	08/18/10	08/19/10	EPA 200.8	

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 - Neeley 13H-18  
Project Number: BBC 1016.01  
Project Manager: Brian Dodek

**Reported:**  
08/19/10 10:38

**Neeley 13H-18 BG01**  
**R008070-02 (Soil)**

**Summit Scientific**

**Colorado Analytical Laboratories**

Date Sampled: **08/12/10 13:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Arsenic</b>	<b>1.27</b>	0.05		mg/kg	1	0081901	08/18/10	08/19/10	EPA 200.8	

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 - Neeley 13H-18  
Project Number: BBC 1016.01  
Project Manager: Brian Dodek

**Reported:**  
08/19/10 10:38

**Neeley 13H-18 BG02**  
**R008070-03 (Soil)**

**Summit Scientific**

**Colorado Analytical Laboratories**

Date Sampled: **08/12/10 13:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>0.42</b>	0.05	mg/kg	1	0081901	08/18/10	08/19/10	EPA 200.8	

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 - Neeley 13H-18  
Project Number: BBC 1016.01  
Project Manager: Brian Dodek

**Reported:**  
08/19/10 10:38

**Neeley 13H-18 BG03**  
**R008070-04 (Soil)**

**Summit Scientific**

**Colorado Analytical Laboratories**

Date Sampled: **08/12/10 14:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>1.31</b>	0.05	mg/kg	1	0081901	08/18/10	08/19/10	EPA 200.8	

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 - Neeley 13H-18  
Project Number: BBC 1016.01  
Project Manager: Brian Dodek

**Reported:**  
08/19/10 10:38

**Neeley 13H-18 BG04**  
**R008070-05 (Soil)**

**Summit Scientific**

**Colorado Analytical Laboratories**

Date Sampled: **08/12/10 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.3	0.05	mg/kg	1	0081901	08/18/10	08/19/10	EPA 200.8	

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 - Neeley 13H-18  
Project Number: BBC 1016.01  
Project Manager: Brian Dodek

**Reported:**  
08/19/10 10:38

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

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 - Neeley 13H-18

Project Number: BBC 1016.01  
Project Manager: Brian Dodek

**Reported:**  
08/19/10 10:38

### 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

A handwritten signature in black ink, appearing to be 'JD' or similar, with a long horizontal stroke extending to the right.

*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.*

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

September 01, 2010

Brian Dodek  
LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada, CO 80003  
RE: BBC - Neeley 13H-18

Enclosed are the results of analyses for samples received by Summit Scientific on 08/26/10 15:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Paul Shrewsbury For Ben Shrewsbury  
President / Laboratory Director



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

Project: BBC - Neeley 13H-18  
Project Number: BBC 1016.01  
Project Manager: Brian Dodek

**Reported:**  
09/01/10 10:02

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Neely 13H-18 Fill-1	R008145-01	Soil	08/25/10 12:40	08/26/10 15:15
Neely 13H-18 Fill-2	R008145-02	Soil	08/25/10 12:53	08/26/10 15:15

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 - Neeley 13H-18

Project Number: BBC 1016.01

Project Manager: Brian Dodek

**Reported:**

09/01/10 10:02

Summit Scientific

2008/45

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

Page 1 of 1

Client: LT Environmental Inc.

Address: 4600 West 60th Ave.

City/State/Zip: Arvada, CO 80003

City/State/Zip:	Alvada, CO 80002
Phone:	702-433-0788 Fax: 303-433-0788

Phone: 303-433-9788 FAX: 303-433-9789

Sampler Name: Brooke Herb

**Project Manager:** Brian Dodek

E-Mail: [bdodek@ltnv.com](mailto:bdodek@ltnv.com)

Project Name: Nelly 13H-18

Project Name: \_\_\_\_\_  
Project Number: \_\_\_\_\_

Project Number:

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative					Matrix			Analyze For:	Special Instructions	
				HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)			Arsenic (6020B)
Neely 13H-18 Fill-1	8/25/2010	12:40	1		X				X					
Neely 13H-18 Fill-2	8/25/2010	12:53	1		X				X					
Relinquished by: <i>Katey</i>	Date/Time: 8/25/10 1500	Received by: <i>[Signature]</i>			Date/Time: 8/25/10 15:15	Turn Around Time (Check)			Notes:					
Relinquished by:	Date/Time:	Received by:			Date/Time:	Same Day			72 Hours			3-5 day TAT Per Co. Anal.		
Relinquished by:	Date/Time:	Received by:			Date/Time:	24 Hours			Standard					
Relinquished by:	Date/Time:	Received in Lab by:			Date/Time:	48 Hours			Sample Integrity:					
Relinquished by:	Date/Time:	Received in Lab by:			Date/Time:	Intact: Yes No			Temperature Upon Receipt: 51.1					

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 - Neeley 13H-18  
Project Number: BBC 1016.01  
Project Manager: Brian Dodek

**Reported:**  
09/01/10 10:02

**Neely 13H-18 Fill-1**  
**R008145-01 (Soil)**

**Summit Scientific**

**Colorado Analytical Laboratories**

Date Sampled: **08/25/10 12:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	2.37	0.05		mg/kg	1	0090103	08/31/10	09/01/10	EPA 200.8	

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 - Neeley 13H-18  
Project Number: BBC 1016.01  
Project Manager: Brian Dodek

**Reported:**  
09/01/10 10:02

**Neely 13H-18 Fill-2**  
**R008145-02 (Soil)**

**Summit Scientific**

**Colorado Analytical Laboratories**

Date Sampled: **08/25/10 12:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>1.45</b>	0.05	mg/kg	1	0090103	08/31/10	09/01/10	EPA 200.8	

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 - Neeley 13H-18  
Project Number: BBC 1016.01  
Project Manager: Brian Dodek

**Reported:**  
09/01/10 10:02

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

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 - Neeley 13H-18

Project Number: BBC 1016.01  
Project Manager: Brian Dodek

**Reported:**  
09/01/10 10:02

### 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

A handwritten signature in black ink, appearing to be 'JD' or similar, with a long horizontal stroke extending to the right.

*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.*