



OGMCOAL DNR &lt;ogmcoal@utah.gov&gt;

---

## 0070020 Horizon Mine Coal Refuse Analysis Results

2 messages

---

**Priscilla Burton** <priscillaburton@utah.gov>

Wed, Jun 14, 2017 at 3:23 PM

To: OGMCOAL DNR &lt;ogmcoal@utah.gov&gt;

Cc: Steve Christensen &lt;stevechristensen@utah.gov&gt;, Daron Haddock &lt;daronhaddock@utah.gov&gt;, Joe Helfrich &lt;joe Helfrich@utah.gov&gt;, Justin Eatchel &lt;jeatchel@utah.gov&gt;, Keenan Storrar &lt;kstorrar@utah.gov&gt;

——— Forwarded message ———

From: **Rachel Buck** <eal@byu.edu>

Date: Wed, Jun 14, 2017 at 2:41 PM

Subject: Soil Analysis Results

To: "priscillaburton@utah.gov" &lt;priscillaburton@utah.gov&gt;

Hi Priscilla,

Attached are the results for the samples we received on 5/24/17. Please let me know if you have any questions!

Thank you,

Rachel Buck – Lab Manager

801-422-2147 [eal.byu.edu](mailto:eal.byu.edu)

---

 **958.pdf**  
43K

---

**Priscilla Burton** <priscillaburton@utah.gov>

Wed, Jun 14, 2017 at 4:22 PM

To: OGMCOAL DNR &lt;ogmcoal@utah.gov&gt;

Cc: Steve Christensen &lt;stevechristensen@utah.gov&gt;, Daron Haddock &lt;daronhaddock@utah.gov&gt;, Joe Helfrich &lt;joe Helfrich@utah.gov&gt;, Justin Eatchel &lt;jeatchel@utah.gov&gt;, Keenan Storrar &lt;kstorrar@utah.gov&gt;

I attached an image with the sampling locations.

Priscilla Burton, MS, CPSSc  
Environmental Scientist III  
Utah Division of Oil, Gas & Mining  
Price Field Office  
phone: [435-613-3733](tel:435-613-3733)

[Quoted text hidden]



**Horizon sample locations.pdf**

373K

# BRIGHAM YOUNG UNIVERSITY

Environmental Analytical Laboratory

244 WIDB  
Provo, UT 84602  
801-422-2147

**Plant and Wildlife Sciences**

**Department**

## SAMPLE TEST REPORT AND RECOMMENDATIONS

Name DNR Div of Oil, Gas, & Mining  
Street 1594 W. North Temple Ste 1210  
Salt Lake City Utah  
City State Zip

Date: 14-Jun-17  
Telephone: 435-613-3733  
Fax: \_\_\_\_\_

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Carbon
Horizon Berm		7.6						

Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Salinity-ECE dS/m	0.5	X					no salinity problem
SAR-Sodium Adsorption Ratio	0.4	X					no sodium hazard
Arsenic ppm As	<MDL						
Boron ppm B	3.26						
Selenium ppm Se	0.01						
Calcium-SAR ppm Ca	98						
Potassium SAR ppm K	11						
Magnesium SAR ppm Mg	28						
Sodium SAR ppm Na	15						
Sulfur % pyritic S	0.11	X					
Acid Potential tons CaCO <sub>3</sub> /1000 tons	3.35						
Ca Carbonate %CaCO <sub>3</sub>	4.46						
Neutralization Pot. tons CaCO <sub>3</sub> /1000 tons	44.6						
Acid Base Potential tons CaCO <sub>3</sub> /1000 tons	41.2						good

Notes:

# BRIGHAM YOUNG UNIVERSITY

Environmental Analytical Laboratory

244 WIDB  
Provo, UT 84602  
801-422-2147

**Plant and Wildlife Sciences  
Department**

## SAMPLE TEST REPORT AND RECOMMENDATIONS

Name DNR Div of Oil, Gas, & Mining  
Street 1594 W. North Temple Ste 1210  
Salt Lake City Utah  
City State Zip

Date: 14-Jun-17  
Telephone: 435-613-3733  
Fax: \_\_\_\_\_

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Carbon
Horizon Coal Berm		7.5						

Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Salinity-ECE dS/m	1.9		X				no salinity problem
SAR-Sodium Adsorption Ratio	0.2	X					no sodium hazard
Arsenic ppm As	0.11						
Boron ppm B	4.23						
Selenium ppm Se	0.12						
Calcium-SAR ppm Ca	657						
Potassium SAR ppm K	21						
Magnesium SAR ppm Mg	119						
Sodium SAR ppm Na	20						
Sulfur % pyritic S	0.24	X					
Acid Potential tons CaCO <sub>3</sub> /1000 tons	7.40						
Ca Carbonate %CaCO <sub>3</sub>	3.48						
Neutralization Pot. tons CaCO <sub>3</sub> /1000 tons	34.8						
Acid Base Potential tons CaCO <sub>3</sub> /1000 tons	27.4						good

Notes:



Horizon berm

Horizon Coal Berm