

0007

Outgoing
c/007/0041

From: Priscilla Burton
To: Dave Shaver; OGMCOAL
CC: Demczak, Steve; Haddock, Daron; Steve Christensen
Date: 2/10/2009 11:01 AM
Subject: Fwd: 007041 West Ridge lab analysis of C Canyon accumulations
Place: OGMCOAL
Attachments: L88693-OL-ParticleSize-report.pdf; L88693-report.pdf; L88693-OL-ACZ-report.pdf

ⓧ

Dave,

The lab sheets indicate that Selenium was analyzed using EPA SW-846 Method 6020. Boron and other salts were analyzed using EPA SW-846 Method 6010B. I can not locate a description of the SW 846 methods used by ACZ laboratories in the on line edition of SW 846 <http://www.epa.gov/SW-846>, but it is likely that the SW-846 method used by the laboratory was run on an acid digest of the sludge. The values listed for selenium and boron as tested by these methods far exceed exceptable limits defined by the Utah Soil and Overburden Guidelines. However, the Division guidelines for selenium and boron limitations are based upon a water extract. The method suggested is described in Table 7 of the Utah Guidelines (a copy of Table 7 was emailed to you on January 28, 2009).

For selenium the recommended method is
Hydride Generation Atomic Absorption -spectrometry and Fluorimetry of Water Extractable Selenium. Soil Science Society of America. Methods of Soil Analysis: Part 3 Chemical Methods. Series No. 5, 1996. Chapter 30. pp 805 - 811.

For boron, the recommended method is run on a saturation extract using Soil Science Society of America. Methods of Soil Analysis: Part 3 - Chemical Methods. Series No. 5, 1996. Chapter 21. p 611.

Please have the laboratory re-run the sample they are holding using the recommended methods for Se and B. And/or have the laboratory provide a citation for the method they are using. And, please have your consultant provide a comparison of the laboratory method with the one recommended by the Utah Guidelines for the Se and B parameters.

In addition, the Sodium Adsorption Ratio (SAR) is calculated from a saturation extract. The values for sodium, magnesium and calcium must be provided in either milli-equivalents per liter or in milli-moles per liter. Please have the laboratory re-run the sodium, magnesium and calcium analysis on a saturation extract as described in Table 3 of the Utah Soil Guidelines (a copy of which was emailed to you on January 28, 2009). Soluble Na, K, Mg, Ca should be run using spectroscopic methods on a saturation extract following the USDA-NRCS. 1996. Soil Survey Laboratory Methods Manual. (SSIR No. 42 ver. 3.), Chap 14 pp 420 - 422, Chap. 19 pp 555 - 557, Chap 20 pp 586-590. The SAR ratio was first described in 1954 (USDA Handbook #60, pg. 72) and the calculation is a well accepted indication of sodium hazard.

File in: 007004/2009. Outgoing
 Refer to:
 Confidential
 Shelf
 Expandable
 Date: 2/10/09 For additional information

Thank you,

Priscilla Burton, CPSSc
Division Oil Gas & Mining
319 Carbonville Rd., Ste. C
Price UT 84501
(435) 613-3733

State of Utah office hours are Mon. through Thurs.,
7 a.m. to 6 p.m.

>>> "Shaver, Dave" <dshaver@coalsource.com> Tuesday, February 10, 2009 8:35 AM
>>>

Priscilla...Attached are the lab sheets you requested. Let me know if there is anything else you need.

Dave

-----Original Message-----

From: Karla Knoop [<mailto:kknoop@jbrenv.com>]
Sent: Tuesday, February 10, 2009 8:28 AM
To: Shaver, Dave
Subject: RE: lab analysis of C Canyon accumulations

Attached.

-----Original Message-----

From: Shaver, Dave [<mailto:dshaver@coalsource.com>]
Sent: Tuesday, February 10, 2009 8:25 AM
To: Karla Knoop
Subject: FW: lab analysis of C Canyon accumulations

Good morning Karla...do you have the back up data from the lab that we can give to Priscilla? Thanks

Dave

-----Original Message-----

From: Priscilla Burton [<mailto:priscillaburton@utah.gov>]
Sent: Monday, February 09, 2009 3:24 PM
To: Shaver, Dave

Cc: Daron Haddock; Steve Demczak
Subject: Re: lab analysis of C Canyon accumulations

Dave,

The reported values for selenium and boron are extraordinarily high. Please provide the original analysis sheets from the laboratory, perhaps there was an error made during retyping the results. The original analysis sheets would also confirm for the purposes of SAR calculation whether sodium, magnesium and calcium were reported on a milliequivalent per Liter basis or on a mg/Kg basis.

Thank you,
Priscilla.

>>> "Shaver, Dave" <dshaver@coalsource.com> Monday, February 09, 2009
>>> 2:40 PM >>>

Gentlemen.....As per your request, attached is the lab analysis of the coal fines material which has accumulated in the drainage below the West Ridge Mine.