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OK

TECHNICAL MEMORANDUM
Utah Coal Regulatory Program

May 17, 2010

TO: Internal File

THRU: Steve Christensen, Team Lead SC

FROM: Priscilla W. Burton, CPSSc, Environmental Scientist III PWB by SRS

RE: Waste Analysis Lab Data, Canyon Fuel Company, Dugout Canyon Mine, C/007/0039, Task ID #3542

SUMMARY:

Supplemental information for Attachment 5-4 of the Dugout Mine MRP was received on April 27, 2010. The information includes the analyses of 28 waste rock samples pulled between February 2009 and January 2010. Five of these analyses taken in February and March 2009 (report date 4/21/2009) have already been reviewed and incorporated under task 3277 (May 2009). Seven samples representing 35,000 tons of waste are potentially acid-forming.

The following request for additional information is made.

R645-300-142 and R645-301-731.311, Please determine the volume of waste transported to the waste rock site in 2009 based upon the average bulk density of the waste. Please calculate the required number of samples for the volume of waste transported and ensure that the Division is provided with one sample/5,000 yd^3 , in accordance with the MRP Section 536.200.

TECHNICAL ANALYSIS:

OPERATION PLAN

HYDROLOGIC INFORMATION

Acid- and Toxic-Forming Materials and Underground Development Waste

Refuse Site [05112010]

The plan indicates that for one grab sample will be taken for every 5,000 yd^3 hauled to the waste rock site (Chap. 5, Sec. 513.400, Sec. 528.300, Sec. 536 and Refuse Pile Amendment Volume Section 536.200). The analytical parameters are described in section 536.200 of the

Waste Rock Amendment Volume. Inter-Mountain Laboratories in Sheriden, WY analyzed these samples.

Waste rock analysis results for 19 samples were received on May 6, 2009 and the analysis of 23 additional samples was received on April 27, 2010 (also included in the annual report). These analyses indicate waste placed in February and March 2009 is sodic (five samples representing 25,000 tons of waste were high pH and high SAR values, EC below 4 mmhos). The August 2, 2009 is acid forming (representing 5,000 tons). Waste placed in November 2009 is suspect for acid formation (sample also represents 5,000 tons). Similar data was noted in approximately one third of the samples taken from December 2004 through March 2005 (Task 2156).

The certification report dated February 2010 (December 2009 inspection date) indicates that 274,000 tons of refuse were hauled to the Dugout Waste Rock site from the Savage Coal Terminal preparation plant in 2009. Collection and sample analysis is based upon volume rather than tonnage. The bulk density of the waste is estimated by the Division as 70 lbs/cu ft or 0.95Tons/cu yd. Based on this estimate, one sample/5,000 cu yd equates to one sample/4,750 tons. Therefore 58 samples should be provided to represent 274,000 tons. The total number of samples analyzed and reported to the Division was 42. Depending upon the bulk density of the waste, the Permittee may not be in compliance with the sampling and analysis requirements of Chap. 5, Sec. 513.400., Sec. 528.300, Sec. 536 and Refuse Pile Amendment Volume Section 536.200.

Appendix A of the 2009 Annual Report contains refuse pile certifications. The February 2010 certification (December 2009 inspection) indicates that the remaining capacity of the waste rock site is 724,222 tons.

Findings:

The information provided does not meet the permit requirements.

R645-300-142 and R645-301-731.311, Please determine the volume of waste transported to the waste rock site in 2009 based upon the average bulk density of the waste. Please calculate the required number of samples for the volume of waste transported and ensure that the Division is provided with one sample/5,000 yd^3, in accordance with the MRP Section 536.200.

RECOMMENDATIONS:

Bulk density of the waste must be known to determine whether sampling was adequate.