

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

November 14, 2005

TO: Internal File

THRU: Pamela Grubaugh-Littig, Permit Supervisor / Task Manager

FROM: Peter H. Hess, Environmental Scientist III/Engineering, Team Lead

RE: B.T.U. Resource Recovery Plan for Refuse, Savage Services Corporation, Savage Coal Terminal, C/007/022, Task ID #2360

SUMMARY:

The Permittee submitted an application to the Division on June 3, 2005 to permit the recovery of "B.T.U. resource recovery material" from the Savage Coal Terminal refuse pile. The recovered material will be blended with coals stored at the Terminal to create a product meeting the contract specifications designated. The Task ID #2267 application indicates that the final product will be shipped to cement plants for "burned waste utilization".

Task ID #2267 received final approval for implementation from the Division on August 19, 2005.

On October 21, 2005, the Permittee submitted revisions to the original, approved plan. The two proposed revisions include:

- 1) The tonnage which will be utilized from the refuse pile at the Savage terminal will be increased from the approved 15,000 tons to a proposed 100,000 tons, and
- 2) The proposal allows for transportation off of the Savage permit area to a non-permitted site for cleaning by an air jig process. Reject from the cleaning process is being proposed to be returned to the permitted Savage Coal Terminal site for final deposition/burial.

On November 14, 2005, the Permittee's engineering consultant (Mr. Dan Guy, P.E., Blackhawk Engineering) submitted revisions to APPENDIX 3-6, B.T.U. Resource Recovery Plan for Refuse Pile for the Permittee that would require sampling of the "reject" material from the air cleaning process prior to returning that material to the permitted Savage Coal Terminal waste rock site for final disposal.

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This document will review the complete submittal, as received on November 14, 2005 for compliance with the R645 Coal Mining Rules.

TECHNICAL ANALYSIS:

OPERATION PLAN

SPOIL AND WASTE MATERIALS

817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

Analysis:

Disposal Of Noncoal Mine Wastes

The Task ID #2360 submittal is relative to coal mine waste; this section is not applicable in this review.

Coal Mine Waste

The coal mine waste storage facility that is located within the disturbed area of the Savage Coal Terminal is an old pile, and same was constructed from material generated by the coal processing plant which still exists at this site. According to Mr. Boyd Rhodes, General Manager of the Terminal, the waste material more than likely came from the Gordon Creek 2, 3, 4, and 6 Mines as well as the Huntington #4 Mine.

The utilization of this waste material has been reviewed once before by the Division, and an approval was received on August 10, 2000 to remove and haul the material to Sunnyside Co-Generation Associates (an electrical generating plant) in Sunnyside, Utah for blending / burning. The Task ID #2267 submittal is not intended to replace that plan, but is an additional method to utilize this material. The utilization of coal mine waste material is a practice which has been implemented at other mines in the Carbon County area for the purpose of enhancing ash-fusion temperature requirements, although that beneficiation has not been specifically addressed within this application.

The waste material received a “No Value Determination” by the USDOJ / Office of Surface Mining on October 28, 2000. However, that determination is relative to abandoned mine lands, which is not relative here.

The USDOJ / BLM /SLO expressed a concern that the material may have a value, based on a report that the material had a BTU value of 10,000. A report prepared by Mr. Don Stephens, a geologist with the BLM in 2002 indicated that the Savage pile material came from the Beaver Creek mines (#'s 3 and 6, and #'s 2, 7, and 8, located in Gordon Creek) and the Huntington #4 Mine during the period of 1979 through 1984. These mines have been closed and reclaimed, and the Federal leases have been relinquished. Because of this, there is no Federal Royalty owed on this waste pile, (Please see the E-mail from Stan Perkes, dated 8/11/2005).

A removal and ground control plan was approved for the recovery of the pile by the U.S. Department of Labor / Mine Safety and Health Administration on July 31, 2000.

Refuse Piles

The method which will be used to recover the material from the refuse pile has been approved by the U.S. Department of Labor / Mine Safety and Health Administration. The current configuration of this pile is such that recovery of the material will not leave high vertical banks that would present a danger to workmen in the area, or to machine operators.

Impounding Structures

There are no impoundments associated with this refuse disposal pile.

Burning And Burned Waste Utilization

The material in the Savage waste rock pile will be recovered and transported off of the permit area to an unpermitted site for cleaning of the material via an air jig process (patented air cleaning technology). The cleaned material (BTU Resource Recovery Material) will be blended with coals or shipped directly to a customer, (See revised page 1 of **APPENDIX 3-6**). Reject from the cleaning process will be transported back to the Savage Terminal refuse pile location. This is necessary because as previously noted the cleaning facility is not within an area which has been permitted through the State of Utah R645 coal mining rules. Thus, the application meets the requirements of R645-301-536.510.

It must be documented that the recovery of the material from the Savage refuse facility and the replacement of the reject material from the air jig cleaning process does not modify the requirements of the approved construction method for the approved refuse pile design. All requirements relative to lift thickness, compaction, maximum overall height, out slope configuration, grading, re-soiling, and re-vegetation remain applicable relative to the reconstruction of the refuse facility with the air jig reject material. Only reject from the air jiggling of the Savage refuse facility material will be returned to the Savage terminal permit area.

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In order to ensure that the cleaning processes which will be conducted outside of the Savage permit area do not add an environmental liability, and to protect the Permittee from this liability, the Permittee will require that a representative sample of the reject be collected from every 5,000 ton quantity and processed for the following parameters from the DOGM "GUIDELINES FOR MANAGEMENT of TOPSOIL and OVERBURDEN", October 2005 edition. From TABLE 3, the reject will be analyzed for pH, electrical conductivity (EC), and soluble sodium, potassium, magnesium, and calcium. From TABLE 7, the reject will be analyzed for total organic carbon, soluble selenium, available boron, acid potential and neutralization potential. The reject will be sampled at the cleaning site, and the analytical data will be reviewed prior to shipment from the unpermitted site to the Savage Coal Terminal area. The revisions submitted on November 14, 2005 contain this commitment.

A volume of material ranging from 15,000 to 100,000 tons will be recovered, cleaned and blended or shipped to cement plants and other customers for "burning and burned waste utilization".

Return of Coal Processing Waste to Abandoned Underground Workings

Not applicable to this submittal.

Excess Spoil

Not applicable to this submittal.

Findings:

The application meets the minimum regulatory requirements of this section.

RECOMMENDATIONS:

The application should be approved.