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March 26, 1998

To: File

Thru: Joe Helfrich, Permit Supervisor-Compliance

From: Peter Hess, Reclamation Specialist III PH

RE: Barn Canyon Ventilation Facility, Cyprus Plateau Mining Corporation, Willow Creek Mine, ACT/007/038-98B, Folder #2, Carbon County, Utah

SUMMARY:

This submittal was received in the Price Field Office on March 6, 1998. Cyprus is proposing to permit a ventilation facility in Barn Canyon approximately 1,000 feet up the Canyon from the current disturbed area perimeter.

The information found in the proposal is not considered adequate to meet the requirements of the R645 regulations. The submittal contains both major and minor flaws.

Although I have reviewed only areas which are relative to the engineering portion of the regulations, the permittee should make the changes necessary to meet the requirements of the R645 rules once all the deficiencies have been aired by the Division.

This submittal needs to be reviewed by the U.S. Department of Labor, Mine Safety and Health Administration per regulation R645-301-523.220.

The nature, timing, and sequence of the activities that propose to mine closer than 500 feet to an active underground mine are jointly approved by the Division and MSHA. Their recommendations must be incorporated before final review and approval can be granted by the Division.

TECHNICAL ANALYSIS:

CONSTRUCTION PHASE

R645-301-536.600. Underground Development Waste

The submittal fails to address any of the requirements of this regulation. No description is made of the shafts dimensions, depth, geologic stratigraphy, method of construction, etc. According to Mr. Pappas, the construction hole will be 17 feet in diameter and approximately 700 feet in depth. This equates to 5,900 cubic yards of waste, of which no method for disposal is mentioned. I assume this material will be placed in School House Canyon, but the requirements R645-301-536.510 must be met, as well as 536.300 et seq.

R645-301-524. Blasting and Explosives

According to Mr. Pappas, the method of construction to be used will be a shaft sinking jumbo and explosives. None of the R645 rules under this section have been addressed.

R645-301-731.121-122. Protection of Surface Water Quality

No description of the methods to be used to control any ground water, which is encountered during the shaft construction or methods of treatment for same prior to discharge off the permit area, are given. If ground water is encountered during the construction process, a re-design of the shaft lining may be necessary to incorporate a water collection ring(s). A means of treating this water prior to discharging it off of the permit area will also need to be addressed.

R645-301-742.321. Diversion of Intermittent Streams, and
R645-301-731.600. Stream Buffer Zones

None of the aforementioned regulations have been addressed.

OPERATION PHASE

R645-301-527. Transportation Facilities

Although the cover letter from Mr. Pappas to Ms. Grubaugh-Littig for this submittal dated 3/6/98 indicates that a ventilation fan may or may not be installed, I have been verbally informed that an escape capsule will be installed. As such, this hoisting system will require a weekly examination under MSHA. If a fan is installed, MSHA will require a daily examination of same. This indicates frequent access. Hence, a maintenance plan for snow removal must be addressed. The road will not be reclaimed, as it currently provides access to Utah Power and Light's 138kV power line. It is my understanding that this power line is to be relocated, so it is uncertain if this post-mining land use will remain the same as the shaft is reclaimed. This appears to throw the Barn Canyon road into the "primary" category. It is my opinion that the road should be permitted.

R645-301-521.161. Maps and Cross Sections of the Proposed Features

As noted above, the air shaft may or may not utilize a fan, but according to what I have been told, it will have an escape capsule. The capsule's hoist mechanism will supposedly get it's power from a cable which is routed up through a casing enclosed within the concrete lining of the shaft. If the mine has an emergency and this power supply is run underground, the possibility of the mine's monitoring system de-energizing this hoist is likely. An independent means of power must be provided for this hoist (as well as the ventilation fan). If the permittee decides to install a back up method of motivation for the hoist (i.e., diesel) that must be discussed and any fuel tanks/engine facilities must be shown on the surface facilities map.

Map 31, Barn Canyon Fan Pad Site Plan and Map, shows no electrical substation. Neither is a power line corridor on any of the maps, although the reclamation costs for two power poles and 150 feet of power line are discussed. The step down of 138kV to the proper mine voltages must be done unless a power line is run up the Canyon from the preparation plant. A lot of uncertainties exist here. See R645-301-526.220.

R645-301-513.500. Compliance with MSHA Regulations/MSHA Approvals

Each shaft must be capped consistent with 30 CFR 75.1711-1. No vent pipe is shown on page 1 of 10, Barn Canyon Shaft plug. I am not certain how many of the other requirements of CFR 75.1711-1 must be met to be granted MSHA approval.

It is recommended that the final design for the shaft plug be P.E. certified.

RECLAMATION PLAN

Page 5.4-7 **Facility Demolition and Removal**, paragraph 4

The permittee appears to be proposing to permit another (this will make five) solid waste disposal area at the Barn Canyon fan site to dispose of concrete debris made during the reclamation process. Due to the shallowness of the replaced fill (in looking at the drawn cross sections) and the gradient of the slopes, I do not feel this is an adequate solution for the disposal of this material. Settling of the fill, plus snow pack and rainfall will more than likely expose this material shortly after it is buried. In lieu of hauling it to one of the already permitted disposal sites, the permittee might want to look at disposing of this concrete debris down the air shaft prior to sealing it. It would be necessary to establish safety devices/procedures to prevent unwanted entrance by machinery and/or employees, (MSHA). Also, although page 5.4-7 mentions disposal areas in reference to Map 32, Barn Canyon Surface Facilities-Post Mining Topography Map, I do not see where these disposal areas are indicated on this map. Only verbiage indicates where this concrete will be placed, and those places are "where voids will need to be minimized to the extent operationally practicable". This is not adequate, based on the depth of the placed backfill. See R645-301-731.220.

RECOMMENDATION:

It is my recommendation that this submittal be returned in its entirety to the permittee so that these concerns plus any others which are aired by the Salt Lake permitting staff may be addressed.

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