



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

December 15, 1997

TO: File

THRU: Daron Haddock, Permit Supervisor 

FROM: David Darby, Senior Reclamation Specialist 

RE: Thickener Pond Redesign at Preparation Plant, Cyprus Plateau Mining Corporation, Willow Creek Mine, ACT/007/038-97J, File #2, Carbon County, Utah

SYNOPSIS

The division received Amendment 97J from Cyprus Plateau, Willow Creek Mine on October 6, 1997. The amendment constitutes a redesign for a three celled thickener pond which will supply wash water for the preparation plant.

A hydrologic review was conducted to ensure the ponds meet design criteria under R614-301-740.

ANALYSIS

An engineering review was conducted by Wayne Western, OGM, with findings presented on November 18, 1997. Mr. Western's findings include sections from R614-301-700.

The applicant indicated that the pond was designed for coal preparation and not runoff storage. Ponds are required to have an emergency spillway to protect the embankment from erosion and collapse in the event that excessive water conditions fill the pond. The submittal did not include calculations identifying the volume of flow that would pass through the emergency spillway. Theoretically, the spillway would have to pass the flow from a 100 yr-6 hr precipitation event with the assumption that the ponds were filled to capacity and still maintain a 1 foot freeboard.

The cross-sectional area of the spillway is shown, however the volume of the thickener in the plant was not supplied. In the event of an emergency blow-down, the volume of the total volume of the ponds and thickener is needed. The applicant must show that the capacity of the spillway will pass the volume of the thickener and design storm event without damage to the pond embankments.

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FINDINGS

The applicant needs to submit values for volumes of thickener and show by calculations that the pond and emergency spillway will contain or pass the volume of thickener and design precipitation event for an emergency.

cc: Daron Haddock, Permit Supervisor
Wayne Western, Senior Reclamation Engineer

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