



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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July 15, 1997

TO: File

THRU: Daron Haddock, Permit Supervisor *NOZ*

FROM: Mike Suflita, Reclamation Hydrologist *MS*

RE: Crandall Canyon Expansion, Genwal Resources, Inc., Crandall Canyon Mine, ACT/015/032-97B, File #2, Emery County, Utah

SYNOPSIS

On June 27, 1997 the Division issued a Permit for Installation of Culvert and Surface Expansion for the subject mine. On June 30, 1997 Genwal submitted to the Division a request for minor revision to the Permit. This Technical Analysis is a review is of the Hydrology aspects of the request.

OPERATION PLAN

Siltation Structures: Sedimentation Ponds, R645-301-732.200, 742.200

Analysis:

The sediment pond has been enlarged to accommodate a request by the U.S. Forest Service (page 37) and this is the main aspect of the revision to the plan. As originally designed, the pond met Division regulations. Now the pond exceeds the regulatory requirements. For example, the pond volume or capacity is 194% of that required for a 10 year -24 hour design storm event. Drainage areas are suitably revised to reflect the revised pond configuration.

The culverts and ditches leading to the sediment pond are also revised to carry the same design event as the pond, namely a 10 year- 24 hour event. This is consistent with the Division Position Paper on the subject.

Findings:

The plan revision fulfills the requirements of this section of the regulations.

Discharge Structures, R645-301-744

Analysis:

The energy dissipator at the outlet of the 72 inch culvert was revised to include a larger sized aggregate, namely from 18 inch to 30 inch. This is more conservative design and will result in reduced likelihood of erosion downstream of the culvert. The original design was acceptable and this revised design is also acceptable. Also, the drawings more clearly indicate that the sediment pond primary spillway, a corrugated metal pipe, will empty directly into the energy dissipator at the main culvert outlet. This design will reduce erosion potential should the spillway flow.

Findings:

The plan revision fulfills the requirements of this section of the regulations.

RECLAMATION PLAN

Diversions: General, R645-301-732.300, 742.300

Analysis:

The length of culvert left in place after the first phase of reclamation is increased from 230 feet to 300 feet. This is of no significant consequence to the overall reclamation.

Findings:

The plan revision fulfills the requirements of this section of the regulations.

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RECOMMENDATION

The revisions to the plan appear to meet the applicable regulatory requirements, and in some instances exceed them. Therefore, the request can be approved.

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