

4/16/87

To: TDN

From: PG-L

Re: Gordon Creek #3 &amp; #6, TDN

In reply to your four questions about the Sedimentation Notice for Gordon Creek #3 & #6 issued 4/10/87 by OSM, I have the following comments:

1. The approved permit states on page 7-22b that "perimeter slopes of the impoundments are 2:1 or less, and slopes are protected with rip-rap where runoff enters the pond."
2. PLATE 7-5 "Gordon Creek #3 & #6 Sedimentation Ponds (As Constructed) Received 12/31/86 - was unacceptable. (See memo to Coal file from Jim Fricke dated 1/27/87). No further correspondence was found regarding this. Not an approved drawing.
3. Due to space constraints and size of pond and rip-rapped channel this slope occurred. Henry Austin should go on site and document what the slopes are now.

- 4) Removal <sup>was</sup> requested <sup>to submit</sup> a stability analysis. Soldier Creek was given a variance (see page 12 of TA outlined in yellow from Soldier Creek Decision Document).

January 27, 1987

TO: Coal File

FROM: James R. Fricke, Reclamation Hydrologist *JRF*

RE: As-Built Sediment Pond Plans for Gordon Creek #3 and #6 Mines, INA/007/017, Folder #2, Carbon County, Utah

The operator submitted the as-built design plan for Stipulation UMC 817.46(1,2), on December 29, 1986. The ponds are adequate to meet the volume and dimension requirements of part one of the stipulation.

Part two of the stipulation required that the as-built pond contour interval be no greater than two feet. The plan submitted does not meet this criteria. Plate 7-4a in the MRP needs to be modified to reflect the current dimensions of the principal spillway.

The verbage in the MRP needs to be changed in Section 7.2.3.2 to reflect the following modifications; pond dimensions, figure references, principal spillway dimensions, and the drop chute spillway changes (remove concrete block portion).

djh  
cc: J. Whitehead  
0798R/18

The embankment construction is slightly over the required height and sufficient compaction was employed during construction to meet the requirements of this section.

The constructed width of the embankment of the sediment pond is 12 feet. By calculation, the embankment height (H) is 12 feet, thus  $(H+35)/5 = 9.5$  feet, therefore the mine facilities sediment pond is in compliance with this section. The proposed sediment pond for the coal refuse storage area is not constructed and may be subject to revision upon final design of the area. Considerations with regard to the refuse area pond will be made upon the submittal of the finalized designs if and when the refuse area becomes active.

As indicated in the as-built construction of the sediment pond and in the proposed reconstruction of the pond, the combined upstream and downstream side slopes of the embankment are greater than 1v:5h. Also the requirement of this section is such that in all cases, the slopes shall be designed to be stable.

The operator has requested a variance from this section and has provided engineering analysis and design criteria such that the pond has a developed factor of safety in excess of 1.5. The registered engineer's report on the as-built submittal and report indicates that the construction of the embankment was sufficient to exceed the criteria used in the design and therefore, the pond as is constructed maintains a factor of safety in excess of 1.5. Factors of safety calculated indicate 2.6 for the inslope under rapid drawdown conditions and 5.2 under full pond conditions. The factor of safety for the outslope of the pond was determined to be 1.79 under these conditions. Additional materials placed at the toe of the embankment as riprap protection have some effect to increase the stability of the outslope of the pond. With regard to these data submitted by the operator in the plan and in the engineer's as-built report, the design is considered sufficient to meet the intent of this section.

Preparation for the foundation of the sediment pond was in accordance with this section.

Fill materials used for the construction were well graded uniform materials suitable for construction of the embankment. Soils analysis of the materials can be found in the as-built submittal provided by the operator.

Procedures for the construction and compaction of the embankment were accomplished in accordance with this section.

No embankments or impoundments meet the criteria of having an embankment height greater than 20 feet or having a storage capacity greater than 20 acre-feet or more. Such requirements made under this section with regard to these criteria do not apply.

4/15

Paul

Re: TDA GC 346

Please ck the following items out for me

- 1) What does the 346 Permit require as far as side slopes, please return pages and plates from MRP
- 2) What In fr do we have on as built's for this pond?   
 plate 7-5 not approved
- 3) Given the space constraints how can we allow this?
- 4) Find out how General and Soldier CK got away w/ steep pond embankments

What is it now?

I'll need answers to these by 4/16/87

TKS

4/27/87 need 12/31/86 pg. 7-22b