



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangarter
Governor
Dee C. Hansen
Executive Director
Dianne R. Nielson, Ph.D.
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

June 30, 1992

TO: Daron Haddock, Permit Supervisor

FROM: Sharon Falvey, Reclamation Specialist *SKE*

RE: NOV N 92-39-3-2 Abatement Submittal, Amax Coal Company, Castle Gate Coal, ACT/007/004, Folder #2, Carbon County, Utah

SUMMARY

To abate N 92-39-3-2, part 1 of 2, the Applicant has presented a modified revision to the previous designs presented for ditches CGD-12 and HCD-2. These ditches were originally designed for the 10 year- 24 hour event. The ditches were also designed using the SCS Type II methodology to determine the design flow. The Operator has proposed new ditch designs using the 10 year - 6 hour storm event and the type "b" hydrograph to determine the design flow. The SCS Type II methodology for these two ditch designs produces a peak discharge (design flow) approximately 3 times greater than that resulting from the Type "b" methodology.

After review of the Hardscrabble ditch HCD-2, it was evident that numerous other errors exist in the drainage plan for the area. On June 29, 1992 in a phone conversation with Bill Hendrickson of Earthfax, I learned that Earthfax was in the process of reworking the designs for Hardscrabble Canyon. The design changes are expected to be submitted with Division Order D #92 A, by July 8, 1992, and with the operational portion of Docket 91-001, in approximately two weeks from the date of conversation.

To abate N 92-39-3-2, part 2 of 2, the Applicant has proposed the text and designs be submitted for the alternate sediment control area in the Hardscrabble Canyon Permit modification responses, this information is found in the June 1, 1992 submittal.

Analysis:

Part 1 of 2

The Applicant has presented adequate ditch designs for the area although a few minor deficiencies exist. Because these deficiencies are minor they can be re-addressed as part of the individual canyon submittal per Docket 91-001.

The Operator has changed the most downstream point for design sizing of HCD-2. The previous designs indicated the HCD-2 ended below Culvert C-3. The revised design ends at culvert C-1. The ditch design at the Castlegate Preparation Plant Mine was divided into an upper and lower section CGD-12A and CGD-12B, respectively. Designs are differentiated for the upper watershed and lower watershed areas. The area is not indicated on a map. Corresponding ditch labels to the specific design also should be presented on the map.

Deficiencies:

1. Update maps to show applicable watershed areas and ditch labels for each ditch design segment that clearly identifies the area applicable to that design.

Analysis:

Part 2 of 2

The Operator shows the location of the operational sediment control area for the site adjacent to the bath house on Exhibit 3.3-3. The sediment control to be used is presented on Table 7-8 in the submittal. The 0.15 acre disturbance is treated with a berm and 1" clean rock on parking lot. No flow predictions, design features are described for the berm. Assuming a 1.9 inch 10 yr. 24 hr. event the runoff depth based on the SCS Type II hydrograph is approximately 1 ". Therefore a minimum berm height of 6" is reasonable.

Deficiency:

1. Provide the designs for alternate sediment control areas in the operation plan. See the attached document titled "Requirements for Alternate Sediment Control Areas".

RECOMMENDATION

The Operator has met the requirements, providing ditch designs for ditch CGD-12 and HCD-2. The Operator has identified the ASCA and provided site remediation therefore the violation is considered abated. The minor deficiencies as well as the ammendment changes should be addressed by the Operator during review of operational submittal, per Docket 91-001.

Requirements for Alternate Sediment Control Areas

Dated August 28, 1991

This Document was previously submitted to Darlene Murphy of Amax as an informal document and part of the technical review to assist in addressing the alternate sediment control area during the Hardscrabble Ponds review. During that review period the ASCA requirements were not pressed because of the greater significance in pond design criteria. Most suggestions were not and are still not addressed.

1. Applicable performance standards from R614-301-740 must be met for a minimum design criteria. Maps and designs must be certified as required under R616-301-731.720, and R614-301-512.

To meet minimum design criteria state:

1. What the function/purpose of the structure is.
2. Describe how the ASCA will be constructed and maintained.
 - a. Describe how the performance requirements will be satisfactorily met.
 - b. Include design calculations that apply engineering principles.
3. Indicate when the ASC will be constructed and when it will be maintained. (Construction of the structure is required before disturbance of site).
4. Provide a map and description indicating:
 - a. Where structures will be placed.
 - b. A description of activities at the site including structure locations.
5. The Operator must submit a complete application and demonstrate reclamation of the area as required by R614-300-133.710.
6. All ASCA's shall be addressed in the PHC including an evaluation of the quantity and quality of water handled, both inflowing and discharged, and the capability of the structure i.e. success in sediment control.