



0050

STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

Norman H. Bangerter, Governor  
Dee C. Hansen, Executive Director  
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August 8, 1986

Douglas C. Pearce  
Mine Engineer  
Kaiser Coal Corp.  
Sunnyside Mines  
P.O. Box D  
Sunnyside, Utah 84539

Dear Mr. Pearce:

Re: Review of Revised SSSF Pond and Drainage System,  
ACT/007/007, Folder #3, Carbon County Utah.

Division Hydrologist Jim Fricke has completed a review of the SSSF Pond plans received July 16, 1986. Attached is a technical review memo which outlines the deficiencies which exist with the plans. After reviewing the memo please feel free to contact Jim Fricke or myself.

Sincerely,

A handwritten signature in cursive script that reads "John J. Whitehead".

John J. Whitehead  
Permit Supervisor/  
Reclamation Hydrologist

JJW/djh  
cc: J. Fricke  
W. Hedberg  
0800R-26  
Attachment(s)

July 31, 1986

TO: Coal File

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

RE: Kaiser Coal Corporation, Sunnyside Mine, ACT/007/007,  
Folder #3, Sunnyside Surface Facilities Sediment Control,  
Carbon County, Utah

The operator proposes to use the East Slurry Cell (ESC) as a sediment pond for the surface facility runoff. The ESC has been approved as a coal process-waste embankment. The definition of coal processing waste is: "earth materials which may be combustible, physically unstable, or acid-forming or toxic-forming, and which are wasted or otherwise separated from product coal, and slurried or otherwise transported from coal preparation plants, after physical or chemical processing, cleaning, or concentrating of coal. The ESC meets the requirements of UMC 817.91-.93 and the definition of coal processing waste." The ESC does not conform with the definition of a sediment pond. A sediment pond is: "a primary sediment control structure designed, constructed and maintained in accordance with UMC 817.46 and including, but not limited to, a barrier, dam, or excavated depression which slows down water runoff to allow sediment to settle out."

The operators proposal does not contain any information as to the ESC meeting the requirements of UMC 817.46. The operator must demonstrate that the ESC will meet the requirements of UMC 817.46 before the Division can approve the ESC as a sediment pond.

The operator proposes to route undisturbed and disturbed runoff through the surface facilities area via a system of ditches and culverts. Several deficiencies exist for the conveyance portions of the plan.

1. The Division disagrees with the curve number methodology used to calculate storm runoff. An area weighted curve number of 83 would be appropriate for the combined areas of the facility area, prep plant, and the undisturbed drainage

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to the east of the facility area. Plate III-12 shows that there is only .914 acres that is either a building or asphalt. The operator assigned a curve number of 95 to this area. Asphalt or buildings should be assigned a curve number of 98. Furthermore, it is doubtful that there is only .914 acres of asphalt on the mine facilities area.

2. On Plate III-27 it is unclear as to how the Slurry Ditch area 1 runoff enters the Ditch D4. It appears that surface runoff from this area will enter the railroad interception ditch and go off-site.
3. The plan does not contain any design information for the slurry culvert from the prep plant.
4. On the Slurry Area Ditch Summary Table, Ditch D-2 is noted as having only 0.15 cfs flowing in it. The Division finds that the flow in this ditch would be 36.0 cfs. The flow results from using a curve number of 83 and a watershed slope of 40 percent. Plate III-12 shows that the flow structure would be Ditch D-2 or Culvert C6-C. The operator must commit to one or the other or provide information as to what will be done for the conveyance structure.
5. Manning's n values must be assigned to all ditch designs to accurately calculate velocity. This information is not supplied in the plan.
6. Ditch D-3 cannot be found on either Plate III-12 or III-27. Please locate this ditch on the appropriate plate.
7. The Slurry Area Culvert Summary Table shows three culverts that will have outlet flow control. They are C6c, C8 and C12. Culvert C6c cannot be analyzed on an outlet control nomograph. The Division finds that this culvert will accommodate 21 cfs, the Division finds that flow to this culvert will be 36 cfs. The plan does not contain information to prove that C6c will accommodate any runoff greater than 21 cfs.

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8. The operator includes a 0.2 foot increase in flow for the ditch and culvert designs for slurry plant flow. This information needs to be transferred into cubic feet per second for proper analysis.
9. Plate III-27 shows a Hillside Diversion to collect surface runoff from the west facing hillside area, please address design specifications for this ditch.
10. Ditch D-4 is undersized to accommodate a flow of 36 cfs plus the .2 foot from the slurry plant. Depth of flow is 1.4 feet + .3 feet of freeboard = 1.7 feet deep. The ditch depth is shown as 1.5 feet in the plan.
11. Ditch D-5 is also undersized for a flow of 36 cfs.
12. The plan does not contain profiles and typical sections for any of the ditches and culverts. Profiles must be submitted for all the ditches and also for culverts with outlet flow control. A water surface profile should be submitted for culverts with outlet control.

djh  
cc: J. Whitehead  
0798R/24-26