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STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

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July 29, 1986

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

Dear Mr. Pearce

RE: Review of Coarse Refuse Toe Sediment Pond Plans, Kaiser Sunnyside Mines, ACT/007/007, Folder #3, Carbon County, Utah.

Division Hydrologist Jim Fricke has reviewed the above referenced submittal. The deficiencies noted below must be addressed before approval can be granted.

1. The pond structure must be located on the drawing insert of D4-0142.
2. Please clarify the drainage direction of the areas adjacent to the 7.53 acres. It appears that runoff from the north and south of the disturbed area will enter the collection ditch.
3. Presently there is an existing sediment pond and a seep that has a high iron content in the area of the coarse refuse toe. The above-mentioned items must be located on drawing D4-0142.
4. The depth of runoff used for the runoff volume calculation is not correct. Both runoff depth and volume must be corrected.
5. A sediment level marker must be shown on the Typical Dam Section drawing.
6. The soil erodibility factor (K) used in the USLE calculation cannot be justified. The procedures used to estimate K require that the percent sand, silt and clay be known as well as the soil structure and permeability for the NJF2 soil complex. This information must be supplied in order to calculate the K factor.

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7. To transform soil loss (USLE) to volume of soil entering the pond the submittal does not provide enough information to justify the volume given. Again, percentages of sand, silt, and clay for the NJF2 soil complex are needed.
8. The elevation of the pond floor in Section A-A does not agree with the pond floor elevation in the typical dam section. The dam height on Section A-A appears to be over 50 feet while on the typical dam section the height is 12.5 feet. Please clarify.
9. The sediment pond design must have provisions for an emergency spillway. According to UMC 817.46(i), an appropriate combination of principal and emergency spillways shall be provided to safely discharge the runoff resulting from a 25y/24h storm.
10. As designed, the sediment pond does not appear to have enough volume to contain the 100Y/24h event as indicated in the plan. Stage-volume curves generated from the plan view of D4-0142 demonstrate that the capacity of the pond is 48,000 ft.<sup>3</sup>, this is considerably less than the submitted volume 59,887 ft.<sup>3</sup>.
11. The submittal must contain a description of the constructed height of the dam. According to UMC 817.46(K) the constructed height of the dam shall be increased 5 percent over the design height to allow for settlement.
12. The decant pipe as shown on the typical dam section must have cutoff collars installed.
13. In equation 9 of the submittal, the second integer in the integral reads  $4.13.75 h^2$  ; this is obviously a typing error, please correct it.
14. The applicant refers to the borrow site area as previously approved by the Division. Please reference where in the Sunnyside MRP this can be found.

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15. The diversion ditch design and layout must be clarified as to:
  - (a) The origin of the ditch;
  - (b) The ditch length (250 ft. appears in error);
  - (c) The ditch slope (2% must be justified);
  - (d) The Manning's "n" for the diversion.
16. The slope of the 2' culvert is unclear, please provide a cross-section of the culvert installation with elevations for the inlet and outlet.
17. Information must be provided on the sizing, installation and reclamation of all the riprap areas. The decant outlet must be protected with riprap or justification must be submitted as to why riprap will not be needed.
18. The application must commit to submitting as-built plans with two-foot contour intervals upon completion of construction of the sediment pond.
19. The submittal must contain a plan for reclamation of the affected areas, after the pond is no longer needed.

If you should have any questions on the deficiencies noted herein please feel free to contact Jim Fricke at 538-5340.

Sincerely,



John J. Whitehead,  
Permit Supervisor/  
Reclamation Hydrologist

JJW/djh  
cc: J. Fricke  
0844R/16-18