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STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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May 30, 1988

TO: John Whitehead, Permit Supervisor

FROM: Brent Stettler, Reclamation Biologist Brent

RE: Review of the 1987 Annual Report, Kaiser Coal Corporation, Sunnyside Mine, ACT/007/007, Folder 6, Carbon County, Utah

I reviewed the 1987 "Vegetative Monitoring Report" prepared by E.I.S. and offer the following comments:

Slaughter Canyon Reclamation (page 6) Judging from a May 18, 1988 on-site inspection, the reported number of woody stems per acre (4048.3) seems highly inflated. Native shrubland may have been sampled, or an error made in calculations.

Several unapproved seed species were included in the Slaughter Canyon final revegetation seed mix. Quantitative sampling during years five and seven must determine the presence and relative dominance of each species. This is especially important for unapproved, introduced species. The Division can then decide what action, if any, is warranted.

Icelander Wash Reclamation (page 11) A heavy invasion of weeds and lack of grasses was reported. This may be cause for concern and merits careful monitoring in future years. The reported vegetative cover of 43.3 percent is poor, considering that Russian thistle, a weedy annual, comprised 75 percent of that amount.

Canyon Drill Site (page 19) Vegetative cover was recorded at 20 percent. However, field sheets were not provided to show how much of that amount was contributed by weedy species. Reconnaissance surveys in future years are recommended.

Whitmore Canyon Drill Site (page 23) "Vegetation Field Notes" recorded 28 percent vegetative cover in contrast to the 20 percent cover stated in the narrative. Stated figures on litter and bare soil disagreed with the field notes as well.

Coarse Refuse Test Plot (page 33) Vegetative sampling was not conducted according to methods described in the study design (Sunnyside MRP, Appendix III-7). Vegetative cover was to be monitored by placing a tape the length of each seeded row and determining what percent of the tape was intercepted by vegetation. In this manner, each species could be quantitatively evaluated across all treatments. This objective was not realized by E.I.S. sampling procedures.

Test plot revegetation was reported to be a failure, with weeds making up the majority of the surviving vegetation. Consequently, the Division approves of Sunnyside Mine's request to discontinue sampling. However, it would be in the operator's best interest to continue experimenting with various coarse refuse revegetation techniques in order to demonstrate reclamation feasibility without a 48-inch covering of borrow material.

Fine Refuse Test Plot (page 41) The Division approves of Sunnyside Mine's request to discontinue monitoring, but recommends that the plot remain fenced and undisturbed for future reference, unless the plot interferes with the mine's operation.

Coarse refuse and slurry were shown to be least capable of supporting vegetation. The success of Mancos shale was partly attributed to its having received runoff from other treatments in the plot. The report suggested that coarse refuse may have fared better -- had nitrogen, phosphorus and mulch been applied. Various soil amendments would be worth testing in future studies.

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