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United States Department of the Interior
OFFICE OF SURFACE MINING
Reclamation and Enforcement
BROOKS TOWERS
1020 15TH STREET
DENVER, COLORADO 80202

File
ACT/015/004
~~Copy to EU &
Tom P & Steve~~

JIM

May 20, 1982

MAY 27 1982

Mr. James W. Smith, Jr.
Coordinator of Mined Land Development
State of Utah Natural Resources and Energy
Division of Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

Dear Mr. Smith:

The Western Technical Center has completed a review of the fish and wildlife, and vegetation information submitted by ARCO Coal Company to address the apparent completeness review for Huntington Canyon #4 Mine. The mine permit application has been found to be essentially complete; however, there are a number of technical deficiencies (Attachment I) which should be resolved during the technical analysis.

If you have any questions or need further clarification, please contact Charles Harrison of this office at (303) 837-5656.

Sincerely,

Richard E. Dawer
Allen D. Klein
Administrator
Western Technical Center

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MAY 27 1982

DIVISION OF
OIL, GAS & MINING

HUNTINGTON #4

Technical Deficiencies Only

Vegetation Information (783.19)

The application is lacking the following baseline vegetation information:

1. Range Condition

An estimate of range condition, based on reference area production, is needed.

2. Sample Adequacy

Sample adequacy for cover, production, and for woody plant density should be computed in all future sampling by using two-tailed "t" values at the appropriate confidence levels and a "d" value of 0.2. for shrublands (Utah DOGM Vegetation Guidelines, p.5).

3. Cover Sampling

It is not clear whether foliar or basal cover was measured for trees and shrubs, using the line-intercept method (see Vol.2, Sec. 9.2.4.3). This should be clarified.

Revegetation Plan (817.111-117 and 784.13b(5))

1. Success Standards

The applicant has not proposed specific success standards for cover or woody plant density; herbaceous production on the reference area apparently will be used to establish the production standard. Will total cover for all canopy layers combined (herbaceous, shrub, and tree) be used to set the cover standard? Will total cover include litter, as well as live vegetation? Is the pre-mine woody plant (tree-shrub) density or the proposed planting rate of 800-1000 plants per acre (see Utah DOGM letter of March 31, 1982 to Shirley Lindsey) the standard for woody plant success? If the pre-mine densities are to be used, then which set of figures would form the standard: plants per acre or stems per acre, for trees only, shrubs only or both combined? What method of evaluating diversity does the applicant propose to use?

2. Planting Mixtures

It is not clear what temporal limit is to be used as the criterion for applying either the temporary or permanent planting mixtures. It would also seem that there are technically two kinds of temporary reclamation: short-term (i.e. less than 3-5 years) and long-term (i.e. life-of-mine). Shrubs need not be planted for short term temporary reclamation. In line with this, more details are needed

regarding the statement that a temporary cover will be established to control erosion (Vol. 2, Sec. 9.7). Is this the short-term, temporary planting mixture? Lastly, the use of competitive introduced species would be acceptable on temporarily reclaimed areas; however, the use of test plots and cover (by species) monitoring to assess the suitability of these species is strongly recommended before using these species extensively in either long-term temporary (>3-5 years) or permanent reclamation seed mixes, as had been discussed previously between OSM and UDOGM vegetation staff.

3. Monitoring

The applicant should provide the details of the reference and reclaimed areas monitoring plans proposed on pages 3-64 and 9-28 of the mine plan. How will weed control and grazing initiation be tied into these plans?

4. Grazing Management

The applicant should propose a specific management plan for the reference area, dependent upon the range condition of this area. The applicant should also commit in the mine plan to submitting any grazing management plan that is developed for reclaimed areas to the regulatory authority one year prior to implementing the plan.

5. Mulching

The applicant should commit to using mulch in all situations, unless adequate justification is presented for not using mulch in specified situations. What mulch is to be used on level to moderately sloping reclaimed areas? Will hydromulch be applied after the seed has been raked into the soil? The applicant should specify the application rates of those mulches that will typically be used on reclaimed areas.

6. General

The Operation and Reclamation Plan (Vol. 1, Sec. 3) and the Vegetation Resources section (Sec. 9) should be re-examined to remove internal contradictions and ambiguities (e.g. "...where necessary") and to update these sections in light of recent correspondence (e.g. seed mixes).

Fish and Wildlife Resources Information (783.20)

1. Surveys for reptiles and amphibians

Most of section 10.2.2.3 describing survey methods is missing from our copy of the MPR.

2. Aquatic Studies

This discussion states that sample sites on Mill Fork were dry during spring, yet section 3.4.3.1 states that Mill Fork is perennial. This discrepancy, or confusion of terms, should be resolved.

Fish and Wildlife Plan (784.21)

Potential impacts on fish and wildlife:

1. There should be a brief discussion of potential impacts on wildlife from subsidence. If springs or seeps are affected, the mitigating effect of sedimentation ponds should be discussed if wildlife has access to such ponds.
2. The roadkill monitoring plan is a good idea. It is suggested that the plan include consultation with UDWR if the number of kills increases. Such consultation would provide the company with new recommendations to minimize those losses.

Protection of Fish, Wildlife and Related Environmental Values (817.79)

1. The monitoring plan should include a commitment to report any new sightings of threatened or endangered species.
2. Although revegetation plans discuss the food and cover value of these plants for wildlife, there is little discussion of planting configurations for shrubs and trees. For most wildlife species, the clumping or grouping of shrubs/trees provides the best cover and edge effect. Since wildlife habitat is a post-mining land use, plant groupings to create edge effect are required.