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State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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September 21, 1988

TO: Susan Linner, Permit Supervisor/Reclamation Biologist
FROM: Lynn Kunzler, Reclamation Biologist *L. K.*
RE: Technical Analysis, Banning Loadout, ACT/007/034,
Folder #2, Carbon County, Utah

Summary

A technical analysis review has been completed for the above referenced mining plan. Topics included in the review include Protection of Fish Wildlife and Related Environmental Values, Contemporaneous Reclamation, Revegetation and Postmining Land Use. A Finding of Reclamation Feasibility was also made pursuant to UMC 786.19(b).

With the exception of Postmining Land Use, these sections were found complete and technically adequate. Inclusion of condition UMC 817.133-(1)-LK will make the postmining land use section complete and technically adequate.

Analysis

817.97 Protection of Fish, Wildlife, and Related Environmental Values-LK

Existing Environment and Applicant's Proposal

The applicant has provided wildlife information and plans in chapter 8, chapter 2, pages 2-11 to 2-14 and Appendix V. Information is adequate to assess the impacts and proposed mitigation for wildlife resources.

The entire permit area is within the Upper Sonoran (cold desert) life zone and provides potential habitat for ca. 142 species of wildlife, including 4 amphibian species, 14 reptile species, 80 bird species and 44 mammal species. Of these, the Pronghorn Antelope (Icelander Antelope Herd Unit II) is of highest interest.

There is no riparian habitat associated with the permit area or other critical valued wildlife habitat.

Most impacts to wildlife occurred as habitat loss due to construction of the site in 1976. This will be mitigated upon reclamation of the site.

Compliance

The applicant has proposed a wildlife mitigation plan that will adequately mitigate continued impacts to wildlife. Specifics of the mitigation can be found in chapter 2, page 2-11 and 2-14 and chapter 8, page 8-3. This plan includes: restoration of wildlife habitat upon cessation of operations (see reclamation plan), employee education, reporting of threatened or endangered plant or animal species, timing major disturbances to cause the least amount of impact, regulating the use of pesticides or other chemicals, preventing fires and their spreading outside the permit area, and operating and maintaining transportation systems and support facilities in a manner that minimizes impacts to wildlife.

All power lines currently associated with the operation are buried. If any above-ground lines are run top the site in the future, they will comply with appropriate guidelines (page 2-11).

The revegetation plan has been designed to provide improved forage for antelope.

The proposed wildlife plan is in compliance with the requirements of this section.

Conditions

None

UMC 817.100 Contemporaneous Reclamation-LK

Existing Environment and Applicant's Proposal

The proposed generation has disturbed ca. 26.1 acres that are currently being used for operations (chapter 20, page 2-1 and 2-11. All reclamation is scheduled for final closure of the facilities.

Compliance

Table 3.8-1 shows the Final Reclamation timetable that indicates reclamation will be conducted as contemporaneously as practicable with the closure of the facilities. Page 3-7 and 5-13 provides plans for stabilizing the disturbances associated with the construction of sediment control structures. A small test plot will be established on site to demonstrate the practicality of the proposed revegetation plan in meeting the postmining land-use requirements (page 3-7).

The proposed plan is in compliance with the requirements of this section.

UMC 817.111-117 Revegetation-LK

Existing Environment and Applicant's Proposal

The Banning Loadout facility is located within a Greasewood-Shadscale desert shrub association of the Upper Sonoran life zone. Vegetation information is included in the MRP as Chapter seven. Common vegetation species include, Shadscale (Atriplex Confertifolia) Broom snakeweed, (Gutierrezia sarothrae), Greasewood (Sarcobatus vermiculatus), Fringed sage (Artemisia frigida), Blue Grama (Bouteloua gracilis), Indian ricegrass (Oryzopsis hymenoides), Bottlebrush squirreltail (Sitanion hystrix), Sand dropseed (Sporobolus cryptandrus), Prickly pear cactus (Opuntia polycanthus) as well as several weedy perennial forbs and annuals.

A reference area was selected in consultation with DOGM in 1987 to best typify the vegetation that existed prior to operations and for use in determining success of reclamation. Quantitative data was collected for cover and shrub density, revealing a vegetation cover of 37% and a shrub density of 5942 plants per acre. Sample adequacy was met at the 80% confidence level and sampling methodology was approved by the Division prior to sampling (pages 7-1 to 7-3). Productivity and range condition were estimated by the Soil Conservation Service in 1987 to be 800 lbs per acre and high fair condition respectively (General Correspondence, Item #11 following page 1-58 of Chapter 1). The location of the reference area is shown on Exhibit 6.2-1.

The applicant has proposed a revegetation plan (pages 3-7 to 3-16 and 7-16 to 7-20) to meet the proposed postmining land use of grazing and wildlife habitat.

Compliance

UMC 817.111 General Requirements-LK

The applicant has proposed a plan to revegetate all lands affected by the operations with the exception of the railroad and access road that will remain as part of the postmining land use with a diverse, effective, and permanent vegetative cover. The plan is designed to encourage a prompt vegetative cover and recovery of productivity levels compatible with the approved postmining land use.

The revegetation plan is in compliance with the requirements of this section.

UMC 817.112 Use of Introduced Species-LK

Yellow sweet clover (Melilotus officinalis) is the only introduced species proposed for revegetation (table 7.2-5). This short-lived biennial plant is known for its soil and stabilizing characteristics and is highly recommended for use in reclamation. It has been used on several sites and has demonstrated that it is non-persistent and is compatible with the plant and animal species of the region.

The proposed species for reclamation are in compliance with the requirements this section.

817.113 Timing-LK

The applicant proposes to seed disturbed areas during the fall planting season prior to snowfall (page 3-8). Table 3.6-1 shows this to be Mid October through November.

Fall seeding has been determined to be the most favorable time for seeding most native species in Utah for optimum success.

The proposed timing for revegetation is in compliance with the requirements of this section.

817.114 Mulching and Other Sort Stabilizing Practices-LK

The applicant will mulch all seeded areas with 2000 lbs/acre of alfalfa or native grass hay. Mulch will be anchored by crimping the mulch into the soil with a disc. Precautions will be taken to assure the mulch is free of noxious weed seeds (Pages 3-7 and 3-8).

The proposed mulching plan is in compliance with the requirements of this section.

817.116 & 117 Standards For Success-LK

The applicant has established a reference area for making comparisons with revegetated areas to determine reclamation success. Comparisons for cover, productivity and woody plant density will be made during the last two years of a 10 year liability period. Success will be determined if the reclaimed area is at least 90% of the reference area for these parameters with a 90% statistical adequacy (Page 3-11).

The applicant has provided a monitoring program to assure that the reference area will remain in fair or better condition. Revegetated areas will also be monitored to demonstrate revegetation establishment is proceeding in an acceptable manner (Pages 3-11 to 3-14).

The proposed revegetation standards are in compliance with the requirements of this section.

Reclamation Feasibility-LK

The proposed revegetation plan has been evaluated to determine whether reclamation can be feasibly accomplished pursuant to UMC 786.19(b).

The plan incorporates seeding methods that are standard for the industry. The species selected are adapted to the site conditions and have been successfully used in similar sites.

Timing is scheduled to coincide to the season of seeding that is optimum for plant establishment.

All revegetated areas will be mulched using an acceptable material and at an adequate rate to assist in moisture retention and reduce erosion. Mulch will be anchored according to standard practices.

Revegetated areas will be monitored to detect any problems or problem areas that might occur so that they may be corrected at an early stage. In addition, the applicant has proposed a testplot (demonstration area) that will be implemented to provide site specific data to demonstrate the proposed plan is feasible. Therefore, a finding that reclamation, as required by the act and the regulatory program, can be feasibly accomplished according to the proposed plan.

Conditions

None.

817.133 Postmining Land Use-LK

Existing Environment and Applicant's Proposal

The applicant has provided regional and local land use information and postmining land use plans in Chapter 3, page 3-1 and Chapter 9, pages 9-33 to 9-38.

The permit area has been zoned by Carbon County as M & G-1 which includes mining, railroads, roads, grazing and wildlife habitat. The Mud Springs Grazing Allotment (BLM) covers the permit area with a period of use being October 20 to June 10 (winter & spring grazing) (Page 9-37).

Compliance

The applicant plans to restore the permit area to a condition capable of supporting the premining land use conditions for grazing & wildlife habitat. The railroad (Denver and Rio Grande Western) and the BLM access road through the permit area will remain (Pages 3-1 and 9-37).

A question regarding the final disposition of fences associated with the operations remains. This includes both the fence around the facilities as well as along the access road. It is recommended the facilities fence remain at least until vegetation on reclaimed sites is well established. The road fence removal needs to be coordinated with the BLM and Wildlife agencies since it may be beneficial for controlling grazing and wildlife movements in the vicinity. Once the fencing issue is resolved, compliance with UMC 817.133 will be achieved.

Conditions

Condition UMC 817.133-(1)-LK

Within 90 days of permit approval, the applicant will provide DOGM with plans for the final disposition of fences associated with the facilities and haul road. Evidence showing coordination in developing the plan with the BLM and Utah Division of Wildlife Resources as well as acceptance by the BLM shall be included in the plan.