

0035



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

March 16, 1999

TO: File

THRU: Daron Haddock, Permit Supervisor

FROM: Paul Baker, Reclamation Biologist

RE: Topsoil Borrow Area, Cyprus Plateau Mining Company, Star Point Mine, ACT/007/006-99B, Folder #2, Carbon County, Utah

DRZ
PMB

SUMMARY:

On February 17, 1999, the Division received a proposal from Cyprus Plateau Mining Corporation for a topsoil borrow area northeast of the existing mine surface facilities.

The amendment is organized separately from the rest of the mining and reclamation plan with its own baseline information, operation plan, and reclamation plan. All of this information is contained in Exhibit 233. This exhibit is referenced in the section titled "Legal, Financial, Compliance, and Information" which has been modified for this application.

In addition to the references to Exhibit 233, Cyprus has made a few changes to the ownership and control section, including some address changes, a change in land ownership for a 21.25 acre piece of land in the permit area, and additions to the list of consultants. These changes are minor and were not reviewed.

TECHNICAL ANALYSIS:

ADMINISTRATIVE INFORMATION

RIGHT OF ENTRY

Regulatory Reference: R645-301-114

Analysis:

The applicant owns the property on which the topsoil borrow area would be located.

Star Point Topsoil Borrow Area

Page 2

ACT/007/006-99B

March 16, 1999

Appendix 1-1 contains a letter from Utah Railway Company giving Cyprus Plateau Mining Corporation permission to use the old railroad grade known as the Wattis Branch as a transportation corridor for hauling topsoil and other material for reclamation purposes. This complies with the requirements of this section of the regulations.

Findings:

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations.

ENVIRONMENTAL RESOURCE INFORMATION

HISTORIC AND ARCHÆOLOGICAL RESOURCE INFORMATION

Regulatory Reference: R645-301-411.140

Analysis:

Cultural resources information is in Appendix 4-1 and summarized in Chapter 4 of Exhibit 233. The area contains a historic trash scatter with tobacco tins and some cans. Intermixed in this area was a prehistoric gray quartzite secondary flake. This site was not considered significant. Appendix 4-1 contains a map showing the area that was inventoried.

The area contains no cemeteries, public parks, or units of the National System of Trails or the Wild and Scenic Rivers System.

Findings:

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations. The Division should recommend to the Division of State History that there will be no effects on cultural resources.

VEGETATION RESOURCE INFORMATION

Regulatory Reference: R645-301-321

Analysis:

Detailed vegetation information is in Appendix 3-1 and was gathered in 1998. The proposed topsoil borrow area contains a sagebrush/grass community with scattered pinyon and

Star Point Topsoil Borrow Area

Page 3

ACT/007/006-99B

March 16, 1999

juniper trees. According to the vegetation survey, it was probably once a mature pinyon/juniper community that was disturbed by chaining or other range improvement activities.

The proposed borrow area had 57.63% cover, and the majority of the cover was from grasses (54.24% relative cover). Dominant grasses were blue grama, and Salina wild rye. Shrubs had 42.39% relative cover, and the dominant species were black sage, Wyoming big sage, and broom snakeweed.

The proposed reference area had a total of 58.13% cover, and relative cover was distributed in a similar manner to the proposed disturbed area. The same species were dominant, and the cover values were not different statistically.

Production in the proposed disturbed and reference areas was 850 and 1000 pounds per acre, respectively, and both areas were rated as being in good range condition. Although these values are estimates from the Natural Resources Conservation Service and cannot be compared statistically, they are similar.

Woody plant density was statistically higher in the proposed disturbed area (11032 per acre) compared to the proposed reference area (8767 per acre). Since these values are used as a guide in developing a technical revegetation standard, the difference is not critical.

Findings:

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations.

FISH AND WILDLIFE RESOURCE INFORMATION

Regulatory Reference:

Analysis:

Fish and Wildlife Information

The application text references Appendix 3-2 for wildlife information from Chris Colt of the Division of Wildlife Resources. According to the application and the letter from Mr. Colt, the borrow area is considered by Wildlife Resources to be high value big game winter range. This is also shown on Map 322.220a in the current mining and reclamation plan.

Threatened and Endangered Species Information

According to the application, there is a peregrine falcon nest that may or may not be within one mile of the proposed borrow site. Future surveys using GPS equipment should better define the nest location. The letter from Mr. Colt indicates the closest nest is 1.1 miles away. Map 322.220a in the current mining and reclamation plan shows a prairie falcon scrape which the text of the plan says was used by peregrine falcons beginning in 1996. The map confirms the information from Wildlife Resources that the closest nest is just over one mile away.

Bald eagles are the only other listed species that has a potential of being in the area, and this would only be in the winter. There are no known nesting sites in the vicinity of the proposed borrow area.

The consultant doing the vegetation survey searched for endangered, threatened, endemic, or otherwise sensitive plants species and found none. The area does not contain habitat for any listed species although it contains potential habitat for at least two species on the Bureau of Land Management sensitive species list.

Findings:

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations.

LAND USE RESOURCE INFORMATION

Regulatory Reference: R645-301-411

Analysis:

The proposed borrow area has been used primarily as rangeland and for wildlife habitat, but there is limited recreational use. Production in the area is presented with the vegetation information. An abandoned Utah Railway railroad grade runs through a portion of the southwest corner of the borrow area, and electrical transmission lines run parallel to the borrow area on property to the east and north. There is no farming in the area.

The area is zoned by Carbon County for mining and grazing, and there is no known previous mining activity.

Findings:

Information provided in the proposal is considered adequate to meet the requirements of

Star Point Topsoil Borrow Area
Page 5
ACT/007/006-99B
March 16, 1999

this section of the regulations.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: R645-301-411.141, R645-301-323

Archaeological Site and Cultural Resource Maps

The one identified cultural resources site is shown on a map in Appendix 4-1 together with the location of the cultural resources survey.

Vegetation Reference Area Maps

The proposed reference area is shown on Drawing 3-1A.

Findings:

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations.

OPERATION PLAN

PROTECTION OF PUBLIC PARKS AND HISTORIC PLACES

Regulatory Reference: R645-301-140

Analysis:

Since the area contains no cultural resources, no protection plan is needed.

Findings:

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations.

Star Point Topsoil Borrow Area

Page 6

ACT/007/006-99B

March 16, 1999

AIR POLLUTION CONTROL PLAN

Regulatory Reference: R645-301-420

Analysis:

In Section 420, the applicant commits to perform all mining activities in compliance with the requirements of the Clean Air Act. Chapter 4 of the current mining and reclamation plan contains further information about the Air Quality Approval Order and coordination with the Division of Air Quality.

Findings:

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations.

INTERIM STABILIZATION

Regulatory Reference: R645-301-331

Analysis:

The application does not contain a specific plan for interim stabilization. Interim stabilization is not generally required at topsoil borrow sites; however, the existing mining and reclamation plan contains an interim revegetation plan that could be used if necessary.

This regulation also requires that the applicant minimize disturbance. The application discusses ways the applicant intends to try to find other sources of growth medium to reclaim the mine. All possible alternatives should be exhausted before the borrow site is disturbed. The proposed borrow site is one of the better sagebrush/grass ranges in the area. It has an excellent mix of grasses and very desirable shrubs, and it is much preferred that the site not be disturbed.

Findings:

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations.

Star Point Topsoil Borrow Area

Page 7

ACT/007/006-99B

March 16, 1999

FISH AND WILDLIFE PROTECTION PLAN

Regulatory Reference: R645-301-333

Analysis:

Protection and Enhancement Plan

The regulations require a protection and mitigation plan when the permit area contains habitats of unusually high value. The proposed topsoil borrow area is in high value big game winter range, but this is not within the definition of habitat of unusually high value. Nevertheless, it is recommended there be no disturbance between December 1 and April 15.

Endangered and Threatened Species and Bald and Golden Eagles

The letter from Chris Colt of the Division of Wildlife Resources contained in Appendix 3-2 says the peregrine falcon nests are far enough away from the proposed activities and that they are screened well enough that there should be no effect on nesting birds.

Wetlands and Habitats of Unusually High Value for Fish and Wildlife

The area is an upland site with no indication of wetlands or riparian areas. As discussed above, it is not habitat of unusually high value for wintering elk and deer.

Findings:

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations.

RECLAMATION PLAN

LAND USE RECLAMATION PLAN

Regulatory Reference: R645-301-412

Analysis:

The applicant has not proposed an alternative postmining land use. Reclamation activities are intended to restore the premining land uses of grazing and wildlife habitat. The procedures needed to achieve the postmining land use are detailed in other sections of the application and existing mining and reclamation plan, especially those sections dealing with soils

and biology.

Findings:

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations.

REVEGETATION

Regulatory Reference: R645-301-341

Analysis:

Revegetation Plan

Once the borrowed soils have been removed, the borrow area will be regraded, ripped to relieve compaction, and deep gouged or similarly scarified. Tables 341.220c and 341.220d in Section 341 of the current mining and reclamation plan show seed and planting mixes that would be used.

The seed and planting mixes in Tables 341.220c and d are designed for sagebrush areas. A few changes should be made, however. Crested wheatgrass is an introduced species that does very well in sites like this, but it does not meet the criteria in R645-301-353.120 for introduced species. It should be eliminated from the seed mix.

In the past, the Division has routinely approved yellow sweet clover for final reclamation on the premise that it increases soil microbial activity. There are indications this species may have allelopathic properties, and while it is highly palatable, it can also be toxic to livestock and wildlife if eaten at the right developmental stage. The Division recommends this species be removed from the seed mix or that the amount used be reduced.

Black sage is the dominant shrub in the area, but it is not included in the seed or planting mix. It should be planted at the rate of 0.5 to 1.0 pounds pure live seed per acre.

The dominant grass is blue grama, but it is also not included in the seed or planting mix. It should be included at the rate of about one pound pure live seed per acre.

“Gordon Creek” is a released variety of Wyoming big sage that originated in the Gordon Creek area just to the north of the proposed disturbed area. It is recommended this variety be used.

Seeding rates of some other species in the mix are unusually high and could be reduced. In particular, the seeding rates for serviceberry, winterfat, mountain mahogany, and northern sweetvetch could be reduced by about one-third to one-half.

Mulching will be done as shown in the current mining and reclamation plan. According to this plan, hay and/or straw will be applied before final soil surface preparation, and this will be incorporated in the soil by plowing along the contour, deep gouging, or a combination of these methods. After seeding, straw or hay mulch will be applied and anchored by either crimping it or applying a tackifier. This mulching method has worked very well at other sites.

No irrigation is planned, and pesticides will not be used unless they are approved by the Division.

Success Standards

As discussed above, vegetation in the proposed reference and disturbed areas is very similar. The reference area is considered an acceptable standard.

The Division is required to gain approval from wildlife agencies for the woody species density standards. The standard proposed in the application is that the reclaimed area would have as many stems per acre as the reference area. If the species composition is the same as now, this would be an acceptable standard. However, some of the other shrub species from the seed mix should establish, and many of these are larger plants than black sage and Wyoming big sage. For this reason, the standard needs to be modified.

It is difficult to set an exact standard when it is not known what species will become established in the reclaimed area. However, the Division has consulted with the Division of Wildlife Resources, and the standard decided upon is 4000 plants (rather than stems) per acre of woody species. Depending on how well certain species grow after the area is seeded, it may be necessary to modify this standard. It is more likely the standard would need to be lowered than raised. If larger shrubs, such as fourwing saltbush, predominate the reclaimed area, the standard will need to be lowered. If smaller shrubs, such as black sage and Wyoming big sage, predominate, it could be necessary to raise the standard. The chosen standard is a compromise between the two situations and is the most likely scenario.

Wildlife Habitat

The guzzler and fence will be moved from the current location, and the exact site to which it will be moved will be determined in conjunction with the Division. No other enhancements are planned.

The seed mix in the mining and reclamation plan with the modifications suggested and

Star Point Topsoil Borrow Area

Page 10

ACT/007/006-99B

March 16, 1999

required is adequate for this area and should provide good wildlife habitat conditions.

Findings:

Information provided in the proposal is not considered adequate to meet the requirements of this section of the regulations. Prior to final approval, the applicant must provide the following in accordance with:

R645-301-341, Crested wheatgrass needs to be removed from the seed mix and black sage and blue grama added.

R645-301-341, The woody species density standard needs to be changed to 4000 plants per acre.

It is recommended that yellow sweet clover be removed from the seed mix or that the seeding rate be reduced. "Gordon Creek" is a variety of Wyoming big sage from just north of the proposed disturbed area, and the Division recommends the applicant use this variety. Seeding rates for serviceberry, northern sweetvetch, mountain mahogany, and winterfat are excessive and could be reduced one-third to one-half.

RECOMMENDATIONS:

The application should not be approved until the deficiencies discussed in this memorandum are adequately addressed.