



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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April 2, 1997

TO: File

THROUGH: Daron Haddock, Permit Supervisor *DH*

FROM: Paul Baker, Reclamation Biologist *PB*

Re: Castle Gate/Willow Creek Separation, Cyprus Plateau Mining Corporation, Willow Creek Mine, ACT/007/038-96E, Folder #2, Carbon County, Utah

SUMMARY:

Currently, the permit areas for the Castle Gate and Willow Creek Mines overlap in the areas of the Castle Gate Preparation Plant, Gravel Canyon and Crandall Canyon. The permittees for these mines have proposed to separate the permit areas. A separate review has been completed for the Castle Gate Mine portion of the separation.

Cyprus has chosen to simply copy several chapters from the Castle Gate mining and reclamation plan and include them in the Willow Creek plan. These chapters contain some commitments that are not compatible with the approved Willow Creek plan.

Rather than writing a technical analysis for the entire Willow Creek mining and reclamation plan, this review considers only the proposed additions to the Willow Creek plan and whether they are compatible with the existing plan.

TECHNICAL ANALYSIS:

OPERATIONS WITHIN PERMIT AREA

Regulatory Reference: R645-300-141

Analysis:

Section 3.9 from the Castle Gate plan discusses several proposed degasification wells to be drilled from an access road in Bear Canyon. These would be outside the current Willow Creek permit area but within the Castle Gate permit area. However, the applicant has proposed to include them in the Willow Creek permit. This may have been

Willow Creek/Castle Gate Separation
ACT/007/038-96E
April 2, 1997
Page 2

unintentional, but it would mean the Castle Gate and Willow Creek permit areas would still overlap. Since all currently-proposed mining for the Willow Creek Mine would be on the east side of the Price River, and since mining on the west side of the river is not anticipated for at least several years, it is suggested the applicant remove this proposal.

If the applicant decides to keep the degasification wells in the proposal, this amendment will need to be processed as an incidental boundary change and the applicant would need to modify any maps of the permit area to include the Bear Canyon area.

Findings:

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

R645-301-100: The applicant has included in the application a proposal to drill several degasification wells in the Bear Canyon area. These would be outside the current Willow Creek permit area, and this proposal would need to be processed as an incidental boundary change. If this is the applicant's intention, the applicant needs to include all pertinent land ownership, right of entry, and baseline information necessary to permit the sites.

RESOURCE INFORMATION

VEGETATION AND WILDLIFE RESOURCE INFORMATION

Regulatory Reference: R645-301-320

Analysis:

Chapter nine from the Castle Gate mining and reclamation plan contains baseline vegetation information for the Castle Gate Preparation Plant and Crandall Canyon areas. The Gravel Canyon area is relatively small and is presumed to have had vegetation similar to what surrounds the preparation plant. Chapter nine includes quantitative vegetation information for three reference areas in Crandall Canyon and two near the preparation plant. The information has been previously approved for the Castle Gate mining and reclamation plan and is considered adequate.

Chapter ten contains wildlife information. For the most part, the information is not site-specific and consists of a report prepared by the Division of Wildlife Resources

Willow Creek/Castle Gate Separation
ACT/007/038-96E
April 2, 1997
Page 3

concerning wildlife in the general area. This chapter does contain some surveys done for specific projects, however. Needed information and commitments for both wildlife information and wildlife protection are contained in the existing Willow Creek mining and reclamation plan.

Findings:

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

OPERATION PLAN

AIR QUALITY

Regulatory Reference: R645-301-420

Analysis:

Appendix 11-1, included in the proposal, contains a copy of the Air Quality Approval Order for the Willow Creek Mine. This approval order is for the mine and the Castle Gate Preparation Plant and supersedes other approval orders previously issued to Price River Coal Company and Castle Gate Coal Company. The approval order does not include the Crandall Canyon facilities or Gravel Canyon. Operations at Gravel Canyon are usually minimal, and the applicant does not intend to use Crandall Canyon in the immediate future; however, they need to be aware that another approval order would probably be needed in the event the Crandall Canyon shafts were reopened.

Findings:

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

RECLAMATION PLAN

REVEGETATION

Regulatory Reference: R645-301-341

Analysis:

The current Willow Creek mining and reclamation plan shows three seed mixtures. One is for upland areas, one is for long-term temporary revegetation, and one is for the realigned sections of Willow Creek.

Chapter 9 of the Castle Gate mining and reclamation plan has been added to the Willow Creek plan. This chapter contains four seed mixes and describes where they should be used although the descriptions are not necessarily complete. However, the various sections from the Castle Gate mining and reclamation plan, some now included in the Willow Creek Plan, specify which seed mixes would be used in which areas. Species list one would be used in areas disturbed before 1977, and species lists two and three would be used for areas disturbed after 1977 and for wildlife areas. Species list four would be used for interim revegetation, and species list five would be used within 20 feet of reclamation channels. Species lists three and five are identical. Sections 3.7 and 3.4 discuss where the seed mixes would be used in the preparation plant and Crandall Canyon areas.

While the plan does show where the seed mixes would be used, the Division makes the following suggestions to simplify the plan:

1. Eliminate species list four from Chapter 9 and keep the interim mix from the Willow Creek plan.
2. Eliminate species list 1 from Chapter 9 and specify that the upland seed mixture in the existing Willow Creek plan will be used to revegetate the Castle Gate Preparation Plant, Gravel Canyon, and Willow Creek Mine areas.
3. Make the following changes to the upland seed mixture for Willow Creek (Table 5.3-2):
 - A. Substitute Bluebunch Wheatgrass (*Elymus spicatus*) for Salina wild rye.
 - B. Add winterfat (*Ceratoides lanata*) to the list of shrubs to be planted. Winterfat seed should be broadcast seeded, and the recommended rate is two pounds per acre.
4. Section 3.7 says species list five will be used within twenty feet of certain reclaimed channels, and Section 3.4-4(1) says species list three will be used along the Price River. Since lists three and five are identical, one of these could be eliminated, but the reference either in Section 3.7 or 3.4 would have to be changed accordingly.

If Cyprus chooses to follow these suggestions and eliminate species list one, they may want to renumber species lists two, three, and potentially four and five. Also, Chapter 9 discusses using certain species lists for wildlife areas, but it does not show where these wildlife areas are. This commitment could probably just be eliminated.

The seeding and mulching methods discussed in the main part of the Willow Creek plan and in Chapter 9 from the Castle Gate plan are generally compatible, but one difference should be corrected. Chapter 9 says a broadcast seeder will be used for small or fluffy seeds in combination with drill seeding. The main part of the Willow Creek plan only says that seed would be drilled. It would be much better to use the combination of seeding methods.

Findings:

Information provided in the proposal to separate the Castle Gate and Willow Creek permit areas is considered adequate to meet the requirements of this section of the regulations. However, information provided in the Willow Creek mining and reclamation plan is not considered adequate. The applicant must provide the following in accordance with:

R645-301-341: In those areas that would be drill seeded, the applicant needs to commit to broadcast seeds of small- or fluffy-seeded species.

LAND USE RECLAMATION PLAN

Regulatory Reference: R645-301-412

Analysis:

The pre- and postmining land uses in the current Willow Creek plan are stated consistently as being industrial/commercial, undeveloped land, and forestry. Undeveloped lands are used for wildlife habitat, recreation and grazing, but these uses are not well developed.

Chapter 4 from the Castle Gate plan, now proposed to be included in the Willow Creek plan, says land use is restricted to non-intensive, nondeveloped uses; i.e., grazing, recreation, watershed, wildlife habitats, and, in localized areas, small surface developments to support underground coal mining activities. Later in this chapter, the plan says the permittee has no intention of requesting regulatory authority approval for redesignation of the present land use which is grazing and wildlife habitat.

It appears the term "non-developed land" is used synonymously with "grazing, wildlife habitat, watershed, and recreation" in portions of the Castle Gate plan proposed to be added to the Willow Creek plan. While the uses are similar, there are important differences in the degree of management, and the designation makes a difference in what revegetation success standards apply.

In addition to the land use designation in Chapter 4, different sections of the Castle Gate plan also discuss the pre- and postmining land uses. Section 3.4 says the postmining land use for the preparation plant area is wildlife habitat and grazing. Section 3.7 says the postmining land use for Crandall Canyon is undeveloped land but that it has the capability of supporting wildlife habitat, grazing and recreation. The postmining land use for Gravel Canyon is wildlife habitat.

The applicant needs to clearly define the pre- and postmining land uses, and the uses shown for the different areas of the mine need to be consistent with what is shown in Chapter 4.

Analysis:

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

R645-301-112: The applicant needs to clearly define the pre- and postmining land uses for all areas of the mine. The uses need to be consistent with the information presented Chapter 4.

RECOMMENDATIONS:

The proposal to separate the Castle Gate and Willow Creek permit areas should not be approved until inconsistencies between the two plans are corrected. Chapter 12 should probably be eliminated from both mining and reclamation plans, and Section 3.9 should not be needed for the Willow Creek plan, at least at this time.