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December 2, 1997

TO: File

THRU: Daron Haddock, Permit Supervisor

FROM: Susan M. White, Senior Reclamation Biologist

RE: Fan Portal Reclamation Review Round III, PacifiCorp, Cottonwood Wilburg Mine, ACT\015\019-97C, Folder #2, Emery County, Utah

SUMMARY:

The reclamation plan for the Cottonwood Fan Portal was reviewed as part of the mid-term in early 1997. The Operator responded to that review with a permit change dated July 1, 1997. My Technical Analysis dated August 8, 1997 reviews the July 1 submittal. The plan was again resubmitted October 1, 1997 and this Technical Analysis reviews this plan. How the permit change fits into the current approved plan was confusing and therefore not reviewed. The amendment should not be approved until the deficiency associated with the land owner is resolved.

TECHNICAL ANALYSIS

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR Sec. 783., et. al.

HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION

Regulatory Reference R645-301-411.

Analysis:

The Old Johnson Mine is located directly across the canyon from the Trail Mountain Mine surface facilities and directly adjacent to the Cottonwood Fan Portal area (Appendix III, page 5 and Plate 3-16A). The Old Johnson Mine site has been recorded as a historic resource and provided with the Smithsonian registration number 42Em1633. An

analysis of the site by F.R. Hauck of AERC concluded that this mine is of historic significance and has the potential for nomination to the National Register. The Johnson Mine site includes two walled-in portals, a mine terrace associated with the portals, road, the remnants of a coal slide or shute, a storage area under a rock walled boulder, an outhouse, and the old weigh house structure. The site is justified to the National Register Status as significant because it is an integral unit.

A rough sketch of the Old Johnson Mine is given in the original 1983 site survey in Chapter 2 Attachment 6. Plate 5-1 delineates the site in conjunction with the other surface facilities of the Cottonwood Mine and Trial Mountain Mine. An e-mail received from Jim Dykman, SHPO, (received August 5, 1997) states: "the road has been updated and changed over, our office believes that the road no longer has integrity and would not be an eligible part of the historic mine". The permit states that the road will be reclaimed.

In section Protection of Public Parks and Historic Places (page 4-40) of the permit a discussion is provided for methods used to protect the Johnson Mine site during reclamation activities. Methods used will include establishing a berm along the roadway, flagging and ribbon barrier zones and educating construction works about the old mine site.

Findings:

The permit meets the minimum regulatory requirements of this section.

FISH AND WILDLIFE RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 784.21; R645-301-322.

Analysis:

Drawing #KS1691C, Cottonwood Fan Portal Raptor Nest Location Map, identifies raptor nests and activity sites, bat activity, and big game use areas in the Cottonwood Canyon Area. Several raptor nests are located within a mile radius of the fan portal, however these nests have not been found to be active in recent years. A Peregrine Falcon pair were observed approximately two miles south of the fan portal area 1996 displaying courtship activities. The reclamation work is not expected to have any impacts on raptors or bats. The permit states that no threatened or endangered species occur on the site property (1976) (page 2-172). The USFWS concerns for the project are habitat for the bald eagle and peregrine falcon and water depletion to the Colorado River. The permit states that no additional water will be used in conjunction with the reclamation of this site. The permit commits to an annual raptor

monitoring program which should identify the presence of Peregrine falcons prior to site activity.

Findings:

The minimum requirements of this section have been met.

LAND-USE RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 783.22; R645-301-411.

Analysis:

The stated premining land use for the general area is range forage and wildlife habitat. The land in the Cottonwood Canyon area is used primarily for spring and winter range forage, wildlife habitat and mineral mining. The area specific to the portal area is to steep for cattle grazing, therefore, the stated postmining land use is wildlife habitat.

No comments could be found in the permit from the surface land owner concerning the proposed reclamation and post mining land use. The L.D.S. Church is shown as the land owner.

Findings:

The permittee must provide the following in accordance with the requirements of:

R645-301-412.200, a copy of the comments from the land owner concerning the proposed reclamation and the post mining land use must be included in the permit.

VEGETATION RESOURCE INFORMATION

Regulatory Reference: R645-301-320.

Analysis:

The Cottonwood Fan Portal Reference area was measured for vegetative cover and shrub density. Average total living cover was estimated to be 42 percent and 762 individual

tree and/or shrubs per acre in 1994 and 1996. Productivity was estimated at 1800 pounds forage per acre based on the reference area in October 1989 (page 2-158.1).

Findings:

The permit is in compliance with the requirements of this section.

RECLAMATION PLAN

REVEGETATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

Analysis:

General Requirements

The seed mixture to be used for final revegetation on the disturbance associated with the Cottonwood Fan Portal (page 32) will be broadcast seeded by hand. (The seed mixture and revegetation techniques used to seed the lower slopes of the fan portal in the 1980's are discussed on pages 33 thru 35.) Slopes 1:1 or steeper will be hydroseeded. All native species have been used in the seed mixture. The seed mixture selection is based on the results of reclamation seeding on the lower fan portal area, the Trail Mountain Mine test plots (across the street) and the surrounding area.

Mulching and Other Soil Stabilizing Practices

Seeded areas will be covered with a curlex blanket. Only slopes 1:1 or steeper will be hydromulched. Curlex blanket has shown to provide excellent soil protection.

Standards for Success.

An area designated in Drawing KS1709D was seeded in 1981. This area is approximately 2.32 acres in size. The remaining portion of the fan portal area will be seeded in 1998. It is assumed that the period of extended responsibility is be the same for both portions of the fan site. Vegetation cover and shrub density of the reclaimed fan portal will be compared to the reference area prior to bond release.

Findings:

The information provided meets the minimum regulatory requirements of this section.

RECOMMENDATION:

Prior to approval the requirement of R645-301-412.200 must be provided as outlined above. Discrepancies and contradicting information may exist when this permit amendment is added to the approved plan. Clarification may be needed that Volume 11 supersedes any other information on the fan portal in other volumes of the approved permit.

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