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DIVISION OF OIL, GAS AND MINING

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June 17, 1999

TO: File

THRU: Joe Helfrich, Permit Supervisor

FROM: Priscilla Burton, Soils Reclamation Specialist

RE: Miller Canyon Portal Reclamation, PacifiCorp, Cottonwood Wilburg Mine, ACT\015\019-99B, Folder #2, Emery County, Utah

SUMMARY:

The three Miller Canyon intake portals were developed in October of 1981. They are located on steep rock outcrops. The portals have been permanently sealed since 1987. Portal #1 discharges water occasionally and is the site of a UPDES Permit. The total acreage of the portals is 0.02 acres, each portal is 8 x 20 ft. PacifiCorp proposes to reclaim the Miller Canyon portals in 1999 using a helicopter to transport the backfill and manually raking and seeding the area. To ensure reclamation success, this project should be conducted in late autumn to take advantage of the meager precipitation during late fall, winter and early spring.

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 783.21, 817.200(c); R645-301-220, -301-411.

Analysis:

As there is currently no reclamation plan for the Miller Canyon portals, this submital has been added to the MRP as Appendix XXII.

The submittal is not entirely complete as the figure and map mentioned on page 2 which were to be located in Attachment #2 were not found. The soils analyses were found in Attachment #2, not in Attachment #3 as described.

The soils which will be used to reclaim the site originated at the Cottonwood Fan Portals and have been stockpiled at the Cottonwood /Wilberg waste rock site since 1995. According to the MRP Order-III survey, the Cottonwood Fan Portal soils fall within map unit AbG, very stony sandy loams derived from sandstone and shale. The Order-I survey in volume 11 describe the fan portal soils as similar to the "Map Unit A, Lithic Ustorthents." Characteristics of this soil are a very stony sandy loam about four inches thick and pale brown, very cobbly silt loam about 10 inches thick. The soil has a low water holding capacity. The erosion hazard is very high when the soil is bare.

Soil pile "B" will be utilized for this project. Approximately 7 CY of topsoil will be required to replace 18" of topsoil on each opening. Appendix #2 contains 1995 soil sampling information from piles "A", "B", and "C." Although it is not clear which of the reported samples is "B," all of the results reported are satisfactory. A more complete discussion of the soils is found in Volume 11 of the MRP.

Findings:

The permittee must provide the following, prior to approval, in accordance with the requirements of:

R645-301-223, R645-301-120 and R645-301-130, Please provide Attachment #2 and Attachment #3 as described on page 2 of the submittal and discussed above .

OPERATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

Topsoil salvaged from the Cottonwood fan-portal area and stored at the Cottonwood Wilberg site will be used for the Miller Canyon reclamation.

Please present information which outlines the volumes of available soil stored at the Cottonwood/Wilberg waste rock site after the Miller Canyon project is completed.

Findings:

The permittee must provide the following, prior to approval, in accordance with the requirements of:

R645-301-231 and R645-301-120, Please provide a tally in tabular form of the remaining soil stockpiled at the Cottonwood Wilberg waste rock site.

RECLAMATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

Each portal will be filled with 41 CY of rock material to create a French Drain. The rock will be covered with a filter liner. On top of the liner, approximately 7 CY of soil will be placed to a depth of 18 inches. Litter and branches will be incorporated into the slope to add stability. The surface will be roughened, seeded, and raked by hand.

The seed mixture to be sown is similar to that described on page 4-19 of Part 4 of the MRP with the following improvements:

Intermediate wheatgrass has been replaced with Great Basin Wildrye (2 lbs/ac).

Needle and thread grass will be seeded at 1 lb/ac rather than 2 lbs/ac.

Small burnet has been replaced with Palmer penstemon at (1 lb/ac).

Yellow sweetclover has been replaced by Yarrow (0.5 lb/ac).

Wyoming big sagebrush (0.5 lb/ac) has been added.

After seeding, hay mulch with netting or an erosion control blanket should be applied

to the soil as described on page 4-20, Part 4 of the MRP.

If it is the intention of the permittee to proceed with the reclamation as soon as possible, the timing is poor for seeding. Table 8 of Appendix XX clearly indicates that there is very little precipitation in June and July. The best time to conduct this reclamation would be in September or October, when precipitation increases. If the seeding fails than it should be repeated in the fall.

Findings:

The permittee must provide the following, prior to approval, in accordance with the requirements of:

R645-301-355, Please add mulching to the reclamation steps described on page 3 of the submittal.

R645-301-354, Please indicate that seeding will be conducted again in late autumn.

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