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TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

September 30, 2010

TO: Internal File

THRU: Daron Haddock, Permit Supervisor *ADH*

FROM: Ingrid Campbell, Environmental Scientist, Team Lead *IC*

RE: Phase II & III Bond Release Fan Portals, PacifiCorp, Cottonwood/Wilberg Mine, Permit # C/015/0019, Task ID # 3600

SUMMARY:

On August 3, 2010, the Division received an application for phase II and III bond release of the Cottonwood fan Portals from Energy West Mining Co. The Cottonwood fan Portal area encompasses 7.47 acres located in the E1/2 of Section 25, T17S R7E. The surface area is owned by the LDS church. Final reclamation was completed in two parts. The first half of the site was reclaimed in 1981 and the remaining portion was reclaimed in November of 1998. On July 21, 2010 the Division conducted a preliminary site visit of the area. The Division approved phase I bond release for the site on March 16, 2004. The site was stable and well vegetated. (See 2010 outgoing document 07292010.pdf). The final bond release inspection was conducted on August 31, 2010 and included representatives from Energy West, the Division, the Office of Surface Mining, the Environmental Protection Agency, the Bureau of Land Management, and the US Forest Service.

Phase II and Phase III bond release of the Cottonwood Fan Portals is recommended for approval pending concurrence from interested state, federal and private agencies and pending updated copies of Maps and texts describing the disturbed area.

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TECHNICAL ANALYSIS:

GENERAL CONTENTS

LEGAL DESCRIPTION AND STATUS OF UNSUITABILITY CLAIMS

Regulatory Reference: 30 CFR 778.16; 30 CFR 779.12(a); 30 CFR 779.24(a)(b)(c); R645-300-121.120; R645-301-112.800; R645-300-141; R645-301-115.

Analysis:

The legal description including the permit area and disturbed area for the Cottonwood/Wilberg Mine is located in the official Mining and Reclamation Plan in the legal/financial volume and on Map 1-3, Permit area Map. The permittee will be required to update the disturbed area acreages on both the map and in the legal volume as a condition to the Division's approval.

Findings:

The information provided is considered adequate to meet the minimum regulatory requirements for this section. Prior to final approval, the permittee must submit updated disturbed area figures.

PERMIT TERM

Regulatory References: 30 CFR 778.17; R645-301-116.

Analysis:

The Cottonwood/Wilberg permit was renewed by the Division on July 6, 2009 and will expire on July 6, 2014. The permit includes one special condition to submit water quality data online on the Division's website.

Findings:

The information provided is considered adequate to meet the minimum regulatory requirements for this section.

PUBLIC NOTICE AND COMMENT

Regulatory References: 30 CFR 778.21; 30 CFR 773.13; R645-300-120; R645-301-117.200.

Analysis:

On August 5, 2010, the Division notified the permittee that the application passed the Administrative Completeness Review and the permittee could proceed with publication. The Division sent out an agency notification to all interested parties on August 5, 2010 (See 2010 Outgoing document 08052010b.pdf).

The Division received an affidavit of publication from the permittee on September 7, 2010. The publication ran for four consecutive weeks ending August 30, 2010 (See 2010 Incoming document 09072010b.pdf). The thirty comment period will be open for thirty days after the last publication which is September 30, 2010.

Findings:

The information provided is considered adequate to meet the minimum regulatory requirements for this section. Prior to final approval, the Division must receive concurrence from OSM, other interested parties.

RECLAMATION PLAN

POSTMINING LAND USES

Regulatory Reference: 30 CFR Sec. 784.15, 784.200, 785.16, 817.133; R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

Analysis:

The land use information is found in the cottonwood/wilberg MRP Volume 2, Part 2 starting on page 175. In the bond release application, attachment 11 submitted by the permittee, the permittee states that the land use was never specified by the land owner and therefore would be considered the same use as the adjacent area, grazing and wildlife. Vegetation cover is currently adequate to meet the postmining land use of grazing and wildlife as shown in attachment 8 of the application, Vegetation analysis for the last two years of Responsibility.

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Findings:

The information provided is considered adequate to meet the minimum regulatory requirements for this section.

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:

Revegetation: General Requirements

Introduced species were eliminated from the seedmix. The revised seed mix is included in Attachment 5, Reclamation Treatments. The seedmix was applied at a rate of 17.5 lbs/acre.

Revegetation: Mulching and Other Soil Stabilizing Practices

After reseeding, energy west applied wood fiber hydromulch at a rate of 2000 lbs/acre with a tackifier at 150 lbs/acre.

Revegetation: Standards For Success

The vegetation Analysis is included in Attachment 8 of the bond release application. Year 9 and 10 vegetation sampling of the Cottonwood Fan Portal area was conducted by Dr. Patrick Collins in 2007 and 2008. Dr. Collins measured cover, composition, production and woody species density of the '81 and '98 reclaimed slopes and the Pinyon Juniper reference area.

In the 2007 monitoring season, Dr. Collins estimated the total living cover of the reclaimed '81 slope to be 48.30%, comprised mainly of shrubs. The total woody species density of this slope was estimated at 4,360 plant/acre. Productivity was measured at 1,395 pound per acre. Dr. Collins estimated the total living cover of the reclaimed '98 slope at 45.25%, comprised mainly of shrubs. Woody species density was estimated at 2,888 plants per acre. Productivity was estimated at 1373 pounds per acre. The Pinyon Juniper reference area was estimated to have 33.67% cover consisting mainly of understory vegetation. Woody species density was measured at 895 plants/acre and production was 449 pounds per acre. Diversity indices for both slopes indicated greater diversity on the reclaimed areas than on the reference area. Photographs of the reclaimed area and of the reference area were included in the report.

In the 2008 monitoring season, the reclaimed slope '81 was estimated to have 49.3% living cover, a woody species density of 4,334 plants per acre, and a production of 495.27 pounds/acre. The reclaimed slope '98 was estimated to have a 43.3% living cover, a woody species density of 2,205 plants/acre, and a production of 349.66 pounds/acre. The reference area was reported to have 35.4% living cover, a density of 1,235 plants/acre and a production of 196.19 pounds per acre. Diversity on both slopes was measured to be greater than the reference area.

In both years, on both reclaimed slopes, all indicators (cover, density, production and diversity) exceeded that of the reference area.

Findings:

The information provided is considered adequate to meet the minimum regulatory requirements for this section.

STABILIZATION OF SURFACE AREAS

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

Analysis:

In addition to establishing vegetation, energy west placed large boulders intermittently around the site to stabilize surface areas.

Findings:

The information provided is considered adequate to meet the minimum regulatory requirements for this section.

RECOMMENDATIONS:

This application is recommended for approval.