

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

April 5, 2006

TO: Internal File

THRU: Wayne Western, Senior Reclamation Specialist, Engineer, Team Lead

FROM: Jerriann Ernstsens, Ph.D., Environmental Specialist III, Biologist

RE: Response to Division Order DO 4-6-00, West Ridge Resources, Inc., West Ridge Mine, C/007/0041, Task ID #2445

SUMMARY:

The Division issued a Division Order to West Ridge Mine to submit as-built drawings and a detailed back filling and grading plan. The construction of the mine site varied substantially from the approved construction design. After several submittals, the Permittee modified the reclamation plan for the portal highwall from a maximum slope of 40° to 33.6°. The toe of the highwall will determine the final location of the channel.

This memo provides the review of the biology-related information pertaining to reclamation that the Permittee submitted on April 29, 2005.

TECHNICAL ANALYSIS:

RECLAMATION PLAN

CONTEMPORANEOUS RECLAMATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.100; R645-301-352, -301-553, -302-280, -302-281, -302-282, -302-283, -302-284.

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Analysis:

The plan includes reclaiming all disturbed areas not planned for use as contemporaneously as possible and within the constraints of seasonality.

Findings:

Information provided in the plan does not meet the Reclamation - Contemporaneous Reclamation requirements of the regulations.

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

The MRP meets the R645-301-353 through R645-301-356 requirements of the regulations because the MRP includes a reclamation plan and discussion of how the reclamation measures will meet the performance standards (Sec. 301-341).

The Permittee proposes to reclaim the highwall area to a slope no greater than 33.6°. The undisturbed slope above the highwall has an approximate slope of 32°. The Permittee plans to apply the methods and materials defined in the MRP to the reclamation project of the highwall area.

The mine site included an “experimental practice” to test preserving soil in place along the bottom of the right fork drainage, adjacent south slope, and near the confluence of the forks with the main canyon drainage. The experimental practice included layering the soil with geotextile and yard fill. At time of reclamation, the Permittee will remove these layers, regrade to original contour, and revegetate according to three different site-dependent reclamation plans. The three different plans are for areas that had topsoil removed or no mentionable topsoil prior to disturbance, or were part of the experimental practice.

There are four different seed mixes (Tables 3-2A-D) designed for pinyon/juniper, Douglas fir/maple, Douglas fir/juniper, and sagebrush/grass plant community types. The revegetation plans for each of the community types vary slightly.

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Some areas may receive supplemental seed of canyon sweet vetch. The use of this species at time of final reclamation depends on field tests and seed availability (Sec. 341.250, Table 3-2B).

Revegetation: Timing

Table 3-1 is a general reclamation timetable that shows reclamation work completed by end of October of year one.

Revegetation: Mulching and Other Soil Stabilizing Practices

The Permittee plans to use certified noxious weed-free hay as an amendment and certified noxious weed-free straw as mulch.

The Permittee may accelerate the recovery period through cryptogamic soil- related best management practices (BMP) known at the time of reclamation. One of the cryptogamic soil-related BMP currently known is to separately salvage the cryptogams prior to soil disturbance. Removal of these cryptogams requires a qualified botanist or soilist to oversee this salvaging process. The cryptogams are respread to the soil surface. One of the best times to salvage cryptogams is in the late fall so the cryptogams remain cool (a preferred growth condition) and have less of a chance of drying out following transplant.

Revegetation: Standards For Success

The Permittee commits to follow sampling requirements identified in the Division's "Vegetation Information and Monitoring Guidelines" (Sec. 341.250).

The postmining land use is grazing and wildlife.

Findings:

Information provided in the plan does meet the Reclamation - Revegetation requirements of the regulations.

RECOMMENDATION

Approve the amendment.

The sagebrush/grass seed mix includes applying 0.5 PLS pounds per acre of rabbitbrush. The Division recommends reducing rabbitbrush seeding rate to 0.1 pounds (or less) of PLS per

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acre. This reduction will reduce the probability of the rabbitbrush population out competing the other shrub species in the seed mix and limiting species diversity.

The Division recommends additional quantitative surveys, within the 10-year period, in order to provide the necessary data to meet Phase II and III bond release standards. The Division provides some recommendations that may help the Permittee achieve Phase II and III bond release. The Permittee may consider rearranging some of the monitoring schedules to include monitoring shrub density at years 4 and 8 following the last augmentation. The 4th and 8th year shrub density surveys are for areas designated as wildlife for the PMLU. The 4th year results do not need to meet the 90% requirement, but the survey is needed to demonstrate that at least 80% of the shrubs and trees have been in place for 60% of the responsibility period (refer to R356.232). The 8th year survey is needed to demonstrate that no shrubs or trees have been in place for less than two growing seasons (refer to R356.232).