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DIVISION OF OIL, GAS AND MINING

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October 23, 2002

TO: Internal File

FROM: Peter H. Hess, Sr. Reclamation Specialist/Engineering, Team Lead *PHH Bryan*

RE: Revisions to Alternate Sediment Control Areas, Appendix 7-4, West Ridge Resources, Inc, West Ridge Mine, C/007/041-DO00A-6

SUMMARY:

The Division generated a deficiency document relative to the inadequacy of alternate sediment control information as included as part of Appendix 7-4, Sedimentation and Drainage Control Plan for the West Ridge Mine. Appendix 7-4 is considered to be a critical part of the "as-built" information that was requested by the Division through Division Order DO00A. After several reviews, a recommendation for approval of Appendix 7-4 was made by the reviewing Division hydrologist on October 3, 2001. The request for information required by the Division Order also included "as-built" information for the portal highwall area. Due to encountering a coal burn in the highwall area that was more extensive than originally anticipated, it was necessary for the permittee to construct a more extensive highwall. This more extensive highwall in turn required a revision to the reclamation plan for same, as well as an evaluation of its affect on the topsoil storage experimental practice. On February 19, 2002, a Notice of Violation was issued to the permittee for "Failure to maintain and / or construct diversions in accordance with the approved designs contained in the approved mining and reclamation plan." Notice of Violation #N02-49-1-1 brought to light the fact that certain designs which had been implemented needed to receive Division approval. Therefore, based upon the reviewing Division hydrologist's recommendation for approval on October 3, 2001, Appendix 7-4, with the exception of the information relative to alternate sediment control areas, received a conditional Division approval on July 3, 2002.

The conditional approval granted by the Division required the permittee to respond to the request for revised alternate sediment control information by August 15, 2002. Although the permittee met the submittal date, the required information for the ASCA's was still inadequate. An onsite meeting was held with the permittee's resident agent, the permittee's engineering consultant, the Division Reclamation Specialist assigned to West Ridge, and the Division team lead on September 12, 2002 in order to clarify all of the issues relative to the mine's alternate sediment control areas. Thus, a deficiency document relative to the inadequacies of the ASCA information submitted on August 15, 2001 was not generated. The permittee submitted revised information on October 3, 2002.

TECHNICAL MEMO

This technical memo will address the information relative to alternate sediment control areas, as received October 3, 2002.

OPERATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

As part of the revised alternate sediment control information received on October 3, 2002, the permittee submitted a new Plate 7-2, Mine Site Drainage Map, along with revised text. The new Map 7-2 depicts four areas which utilize alternate sediment control methods within the mine's disturbed surface facilities area. These are:

- 1) ASCA "W"; this ASCA lies on the west side of the County road on the cut bank created to construct that portion of it. Runoff reports to the disturbed ditch designated as UD-15 from the cut bank as well as the County road. Volume 2, Chapter 5, Engineering, Section R645-301-527 TRANSPORTATION FACILITIES, page 5-33 paragraph four, references this portion of the County road drainage reporting to the same ditch (UD-15) as the runoff from the cutbank. The watershed for ASCA W encompasses 1.33 acres as described on page 12 of Appendix 7-4, Section 2.11, ALTERNATE SEDIMENT CONTROL AREAS. This acreage is also depicted on Map 7-2, in the lower left corner. The treatment methods described in the MRP text coincide with the treatments depicted on the Plate 7-2 legend.

Chapter 5, page 33 of the West Ridge mining and reclamation plan discusses that portion of Carbon County road that exists within the mine's disturbed area perimeter, (i.e., above the gate). Figure 5-3, West Ridge Road, Typical Cross Section, shows a cross-section of the road. As depicted by Figure 5-3, the road is crowned in the center with a 2 % gradient that will allow precipitation to flow toward ditch UD-15. Hence, the center of the County road is accurately depicted as the demarcation line or eastern boundary of the ASCA. The western boundary of the ASCA is the crest of the road cut made to construct the road.

- 2) ASCA "X"; (See Map 7-2); this alternate sediment control area is also described on page 12 of Appendix 7-4, as well as within the ASCA legend provided on Plate 7-2. ASCA "X" encompasses 1.19 acres. The Test Plot area is encompassed within ASCA "X" and consists of 0.14 acres of the total 1.19 acres. The Test Plot area utilizes a silt fence about the down-sloped areas as treatment for the runoff. Pocking and vegetation are also used here. An undisturbed drainage lies adjacent to the western boundary and it is included within the ASCA area. Much of the sediment control within the ASCA is provided by undisturbed natural vegetation. The only disturbance created during the construction of the Test Plot area (outside of the Test Plot area itself) were wheel tracks created over the vegetation by the rubber-tired backhoe used to construct the area. These wheel tracks are approximately 275 feet long, traveling from the inlet of the right fork undisturbed drainage culvert to the Test Plot area. The natural vegetation that was flattened by the trampling rubber-tired construction equipment has since revitalized itself.

ASCA "X" also encompasses the northeast end of the right fork topsoil storage area. A total containment basin exists between the toe of the topsoil pile and the northeast edge of the main facilities disturbance. A design which includes runoff calculations for the 10 year, 24 hour event is certified by a Utah registered professional engineer has been included. Figure 7 includes both plan views and a cross section of this containment. It also shows that a sediment cleanout marker and the maximum depth to which sediment will accumulate before the containment is cleaned.

The treatment methods described on Map 7-2 for ASCA "X" include silt fence, vegetation, roughening, and containment. Map 7-2 and the text of the mining and reclamation plan are congruent with the field conditions of ASCA "X".

- 3) ASCA "Y" lies in the left hand fork of "C" Canyon, and encompasses the outslope of the left hand fork coal storage pad from the berm at the crest to the Canyon drainage (inlet to undisturbed bypass culvert UC-HH). The disturbed area acreage here is 0.04 acres; large rock has been placed such that the entire slope is covered. Thus, sediment control / erosion protection is provided by reducing raindrop impact via the large rock. Map 7-2 is congruent with the MRP text.

TECHNICAL MEMO

- 4) ASCA "Z" is depicted on Map 7-2, Mine Site Drainage Map. This area encompasses the parking area and the mine office (1.62 acres). The western boundary of ASCA "Z" takes in 385 feet of the County road on the opposite side of the "crown" discussed within ASCA "W". The eastern boundary of ASCA "Z" is co-linear with the crest of the cut bank constructed during the development of the office pad area. The northeast boundary takes in the crest and the outslope of the dam embankment of Cell "B" of the sediment pond. The toe of the outslope of the mine office / parking lot pad is co-linear with the SW boundary. The treatment listed for ASCA "Z" on Map 7-2, and correlated by Page 12 of Appendix 7-4, is as follows:
1. "The parking lot pad is sloped to the NE where any runoff is contained and evaporated. The retention area also contains a small drain and gravel field to provide some percolation of runoff.
 2. Erosion protection is provided by the durable rock (slag) installed on the surface of the parking area and large rock and vegetation on the outslope.
 3. A silt fence exists at the toe of the outslope."

Runoff calculations have been provided for four events, including a 10-year, 24-hour design event for the ASCA areas discussed above. These are shown in Table 9, page 28 of Appendix 7-4.

The effectiveness of the treatments utilized by each of the aforementioned alternate sediment control areas will be evaluated by the inspection process at the site.

Findings:

The submitted information is adequate to address the R645 requirements as they relate to alternate sediment control areas.

RECOMMENDATIONS:

The revised information received relative to the alternate sediment control areas at the West Ridge Mine should be approved.