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State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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April 22, 2002

Mike Glasson, Environmental Coordinator
West Ridge Resources, Inc.
P.O. Box 902
Price, Utah 84501

Re: Midterm Review, West Ridge Resources, Inc., West Ridge Mine, C/007/041-MT01-1, Outgoing File

Dear Mr. Glasson:

The above-referenced amendment has been reviewed. There is a deficiency that must be adequately addressed prior to approval. A copy of our Technical Analysis is enclosed for your information. In order for us to continue to process your application, please respond to these deficiencies by May 19, 2002.

If you have any questions, please call me at (801) 538-5325 or Karl R. Houskeeper at (435) 613-5330.

Sincerely,

Daron R. Haddock

Daron Haddock
Permit Supervisor

KRH/sd
Enclosure
cc: Price Field Office
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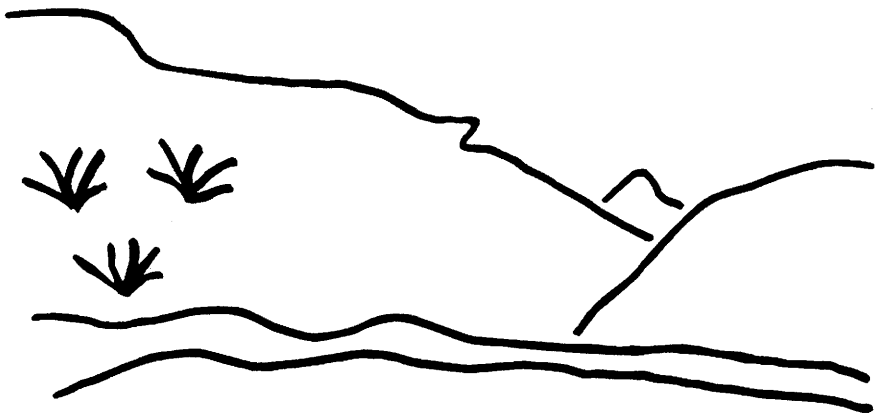
State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

West Ridge Mine
Mid-term Review
C/007/041-MT01-1
Technical Analysis
April 17, 2002

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TECHNICAL ANALYSIS

INTRODUCTION

On October 4, 2001, the Division initiated a Midterm Review of the West Ridge Mine operation. The review team visited the site on November 8, 2001. A letter dated November 26, 2002 and Technical Analysis (TA_MT01) showed three deficiencies that needed to be addressed. The operator responded to these deficiencies in March 2002. Two of the deficiencies were adequately addressed, however one deficiency still needs further clarification. This deficiency is identified in the summary of deficiencies and further described in the TA. A narrative of all of the deficiencies listed in (TA_MT01) is given in this Technical Analysis in an effort to provide proper documentation.

The pertinent soils issue under review is compliance with the requirements of the permit for experimental practices. The April 3, 1999 Permit to conduct coal mining has a Special Condition in Attachment A that requires both the Division and West Ridge to evaluate annually the effectiveness of the experimental practice. The Division is charged with conducting "annual reviews of the practice to ensure that it fully protects the environment and the public health and safety."

In last year's (2000) annual evaluation of the experimental practice (AM00F), the Division expressed concern about the potential for acid leachate adversely affecting soils buried under the pad. As a result, West Ridge Resources, Inc. developed an annual monitoring plan to detect the potential for acid formation and added this plan as an Addendum to Appendix 2-6. Sampling of the soils was conducted in September 2001.

West Ridge Resources, through their Environmental Coordinator, Mike Glasson, have committed to sample the face of the Right Fork for chemical characteristics in the spring of 2002. This sampling should include all parameters in Table 6 of the Divisions Topsoil and Overburden Handling Guidelines, 1988. This commitment helped to resolve one of the deficiencies in (TA_MT01) and should be monitored to assure proper follow-up.

Mr. Glasson also indicated that the protection and storage of Colluvial Growth Material (CGM) did not follow the MRP due to a limited Travesilla resource.

INTRODUCTION

SUMMARY OF DEFICIENCIES

The Technical Analysis of the proposed permit changes cannot be completed at this time. Additional information is requested of the permittee to address deficiencies in the proposal. A summary of deficiencies is provided below. Additional comments and concerns may also be found within the analysis and findings made in this Draft Technical Analysis. Upon finalization of this review, any deficiencies will be evaluated for compliance with the regulatory requirements. Such deficiencies may be conditioned to the requirements of the permit issued by the Division, result in denial of the proposed permit changes, or may result in other executive or enforcement action as deemed necessary by the Division at that time to achieve compliance with the Utah Coal Regulatory Program.

Accordingly, the permittee must address those deficiencies as found within this Draft Technical Analysis and provide the following, prior to approval, in accordance with the requirements of:

Regulations

R645-301-230, The narrative of the MRP should accurately reflect the storage location(s) of Colluvial Growth Material. 6

SUMMARY OF OUTSTANDING DEFICIENCIES

OPERATION PLAN

TOPSOIL AND SUBSOIL

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

Minimum Regulatory Requirements:

Topsoil removal and storage

All topsoil shall be removed as a separate layer from the area to be disturbed, and segregated. Where the topsoil is of insufficient quantity or of poor quality for sustaining vegetation, the selected overburden materials approved by the Division for use as a substitute or supplement to topsoil shall be removed as a separate layer from the area to be disturbed, and segregated. If topsoil is less than 6 inches thick, the operator may remove the topsoil and the unconsolidated materials immediately below the topsoil and treat the mixture as topsoil.

The Division may choose not to require the removal of topsoil for minor disturbances which occur at the site of small structures, such as power poles, signs, or fence lines; or, will not destroy the existing vegetation and will not cause erosion.

All materials shall be removed after the vegetative cover that would interfere with its salvage is cleared from the area to be disturbed, but before any drilling, blasting, mining, or other surface disturbance takes place.

Selected overburden materials may be substituted for, or used as a supplement to, topsoil if the operator demonstrates to the Division that the resulting soil medium is equal to, or more suitable for sustaining vegetation than, the existing topsoil, and the resulting soil medium is the best available in the permit area to support revegetation.

Materials removed shall be segregated and stockpiled when it is impractical to redistribute such materials promptly on regraded areas. Stockpiled materials shall: be selectively placed on a stable site within the permit area; be protected from contaminants and unnecessary compaction that would interfere with revegetation; be protected from wind and water erosion through prompt establishment and maintenance of an effective, quick growing vegetative cover or through other measures approved by the Division; and, not be moved until required for redistribution unless approved by the Division.

Where long-term surface disturbances will result from facilities such as support facilities and preparation plants and where stockpiling of materials would be detrimental to the quality or quantity of those materials, the Division may approve the temporary distribution of the soil materials so removed to an approved site within the permit area to enhance the current use of that site until needed for later reclamation, provided that: such action will not permanently diminish the capability of the topsoil of the host site; and, the material will be retained in a condition more suitable for redistribution than if stockpiled.

The Division may require that the B horizon, C horizon, or other underlying strata, or portions thereof, be removed and segregated, stockpiled, and redistributed as subsoil in accordance with the above requirements if it finds that such subsoil layers are necessary to comply with the revegetation.

Analysis:

Removal and Storage

During construction and excavation of cut slopes in the RO/RL areas, the Permittee salvaged colluvial growth/surface material (CGM) from the truck loop area and the west side of the left fork coal storage area according to the plan and as shown on Map 5-10, Construction /Reclamation Area-Types. The CGM was stored within the coal stockpile pad area and in the core and outslope of the two embankments of the two sediment ponds, and in the office pad as identified on Maps 5-5 and 7-4. These sediment ponds embankments were seeded with an

interim mix. Signs identifying the embankments as topsoil storage areas were not noted during the onsite site inspection on November 8, 2001.

In a memo to the Division dated December 19, 2001, Mr. Michael Glasson, Environmental Coordinator for West Ridge Resources, explained, "A sign was in place at the site of the CGM storage during the inspection. Only sufficient material was available for CGM storage in the upper dam. The lower dam was constructed of other material. Map 5-10 shows only the upper dam as storage."

Map 5-10 is Construction/Reclamation Area-Type map. Map 5-10 indicates three GCM storage areas, but revision #2 of Plate 5-10 (received July 14, 2001, not yet approved) shows only a single location of storage.

Throughout the MRP mention is made of the CGM material and its salvage and storage in sediment pond embankments and the office pad (Chapter 2, pp 2-6, 2-7, 2-17; Appendix 5-5 Part I Construction Plan, Item 8i, pp27-28 and Part II Reclamation Plan, Item 4d, pp43 and 44). Approximately 3,000 cubic yards of CGM were anticipated. A soils specialist, Pat Johnston, was on site during the construction. The Division would recommend a review of Ms. Johnston's soils reports before changes are made to the plan to reflect actual on-site storage of CGM material. The narrative of the MRP should be corrected to reflect actual placement of CGM material.

Findings:

The information provided is not adequate to track the location of substitute topsoil. Prior to approval and in accordance with:

R645-301-230, The narrative of the MRP should accurately reflect the storage location(s) of Colluvial Growth Material.

SPOIL AND WASTE MATERIALS

Regulatory Reference: 30 CFR 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

Minimum Regulatory Requirements:

Coal mine waste

Each plan shall contain descriptions, including appropriate maps and cross-section drawings of the proposed disposal methods and sites for placing underground development waste and excess spoil generated at surface areas affected by surface operations and facilities. Each plan shall describe the geotechnical investigation, design, construction, operation, maintenance, and removal, if appropriate, of the structures.

All coal mine waste shall be placed in new or existing disposal areas within a permit area that are approved by the

Division for this purpose. Coal mine waste shall be placed in a controlled manner to:

1.) Minimize adverse effects of leachate and surface-water runoff on surface- and ground-water quality and quantity;
2.) Ensure mass stability and prevent mass movement during and after construction;
3.) Ensure that the final disposal facility is suitable for reclamation and revegetation compatible with the natural surroundings and the approved postmining land use;
4.) Not create a public hazard; and
5.) Prevent combustion.

Coal mine waste materials from activities located outside a permit area may be disposed of in the permit area only if approved by the Division. Approval shall be based upon a showing that such disposal will be in accordance with the standards of this section.

The disposal facility shall be designed using current, prudent engineering practices and shall meet any design criteria established by the Division. A qualified registered professional engineer, experienced in the design of similar earth and waste structures, shall certify the design of the disposal facility. The disposal facility shall be designed to attain a minimum long-term static safety factor of 1.5. The foundation and abutments must be stable under all conditions of construction. Sufficient foundation investigations, as well as any necessary laboratory testing of foundation material, shall be performed in order to determine the design requirements for foundation stability. The analyses of the foundation conditions shall take into consideration the effect of underground mine workings, if any, upon the stability of the disposal facility.

If any examination or inspection discloses that a potential hazard exists, the Division shall be informed promptly of the finding and of the emergency procedures formulated for public protection and remedial action. If adequate procedures cannot be formulated or implemented the Division shall be notified immediately. The Division shall then notify the appropriate agencies that other emergency procedures are required to protect the public.

Analysis:

Coal Mine Waste

In the Mining and Reclamation Plan, Section R645-301-528.321 Handling and Disposal of Coal, Overburden Excess Spoil and Coal Mine Waste indicates that there will be no long-term disposal of coal mine waste. All waste will be taken underground. The two short-term storage locations shown on Map 5-5 are limited to the storage of approximately 12 cubic yards (one truck load) for a maximum of six months on the surface.

No coal mine waste was noted on the surface at the time of the site visit.

Laboratory analyses of the roof and floor and coal seam from the Left Fork outcrop were viewed during the site visit. These 1997 analyses indicated that the coal seam is acidic (pH 3.4) with no buffering capacity (Neutralization Potential of –16.3t/1000t). The roof of the coal seam has more buffering capacity than the floor (163t/1000t versus 4.47 t/1000t). The pH of the roof was 7.8 and the pH of the floor was 7.3. The texture of the roof was sandy loam (62% sand, 24% silt, 14% clay). The texture of the floor was almost pure sand (92%) as was the coal (90%).

In the Division's March 9, 1999 Technical Analysis (pg 53), the point was made that:

- *"The face-up of the four portals at the lower Sunnyside outcrop will probably generate some non-saleable product. This will be placed in the surface facilities pad as part of the fill. The applicant commits to meeting all requirements of the R645 rules mentioned under 528.340. Map 5-10, Construction/Reclamation*

Area-Types, shows the placement location of the face-up development waste in the facilities pad. If the material tests positive for acid and/or toxic forming, then it will be disposed at a State permitted disposal site, such as ECDC. ECDC is not a DOGM permitted site. This may present a problem."

Analytical reports for the Right Fork roof and floor and coal were not found at the site on November 8, 2001, in the 2000 Annual Report, or in the MRP. In a memo to the Division dated December 19, 2001, Mr. Michael Glasson, Environmental Coordinator for the West Ridge Mine indicates, "The Right Fork face up material sampling information cannot be found. In spring of 2002, samples of the roof and floor at the face up area will be taken and analyzed."

The Spring 2002 sampling of the Right Fork face-up material will shed light on the chemical character of the spoil from the Right Fork face, which was buried in the pad as shown on Map 5-10.

Findings:

West Ridge Resources, through their Environmental Coordinator, Mike Glasson, have committed to sample the face of the Right Fork for chemical characteristics in the spring of 2002. This sampling should include all parameters in Table 6 of the Divisions Topsoil and Overburden Handling Guidelines, 1988. Sampling to be conducted in the spring of 2002 will satisfy the requirements of the Regulations.

REQUIREMENTS FOR PERMITS FOR SPECIAL CATEGORIES OF MINING

EXPERIMENTAL PRACTICES MINING

Regulatory Reference: 30 CFR 785.13; R645-302-210, -302-211, -302-212, -302-213, -302-214, -302-215, -302-216, -302-217, -302-218.

Minimum Regulatory Requirements

No application for an experimental practice under this section shall be approved until the Division first finds in writing and the Director then concurs that:

1.) The experimental practice encourages advances in mining and reclamation technology or allows a postmining land use for industrial, commercial, residential, or public use (including recreational facilities) on an experimental basis;
2.) The experimental practice is potentially more, or at least as, environmentally protective, during and after mining operations, as would otherwise be required by the regulatory standards;
3.) The mining operations approved for a particular land use or other purpose are not larger or more numerous than necessary to determine the effectiveness and economic feasibility of the experimental practice; and
4.) The experimental practice does not reduce the protection afforded public health and safety below that provided by the regulatory standards.

Experimental practices granting variances from the special environmental protection performance standards applicable to prime farmland shall be approved only after consultation with the U.S. Department of Agriculture, Soil Conservation Service.

Each person undertaking an experimental practice shall conduct the periodic monitoring, recording, and reporting program set forth in the application, and shall satisfy such additional requirements as the Division or the Director may impose to ensure protection of the public health and safety and the environment.

Each experimental practice shall be reviewed by the Division at a frequency set forth in the approved permit, but no less frequently than every 2 1/2 years. After review, the Division may require such reasonable modifications of the experimental practice as are necessary to ensure that the activities fully protect the environment and the public health and safety. Copies of the decision of the Division shall be sent to the permittee and shall be subject to the provisions for administrative and judicial review.

Revisions or modifications to an experimental practice shall be processed in accordance with the regulatory requirements for revisions or modifications and approved by the Division. Any revisions which propose significant alterations in the experimental practice shall, at a minimum, be subject to notice, hearing, and public participation and concurrence by the Director. Revisions that do not propose significant alterations in the experimental practice shall not require concurrence by the Director.

Analysis:

As a result of the Division's concern that acid-producing materials could contaminate soils buried under the fill, the soil-sampling program was modified to include the following commitment in the 2000 Addendum to Appendix 2-6 of the Mining and Reclamation Plan:

"West Ridge Resources Inc. will establish an annual soils monitoring program, starting in the year 2000, to sample and determine if the mine pad areas affected by the coal are being acidified. The monitoring will be conducted as follows:

1. *Samples will be taken from approximately 3" below the surface to a depth of*

approximately 6" at location T-1, T-2, and T-3, shown on Plate 2-2;

2. *Samples will be analyzed for acid/toxic-forming potential per Division guidelines; however, if the roof and floor samples in the right fork near the portals do not indicate any toxicity problems, the soils will only be tested for acid/base potential;*

3. *Sample results will be reported with the Annual Report for the mine;*

4. *In the event acid conditions are detected on the surface, then further investigations and sampling will be conducted to determine if the acid leachate is permeating the fills. If such a condition is found, West Ridge Resources, Inc. will take corrective measures to protect the buried soil resources from additional acid leachate. Such measures will be discussed with the Division prior to implementation."*

Samples were taken from a depth of 3 – 6 inches near locations T-1, T-2, and T-3 (as described in the report). Locations T-1, T-2, and T-3 are shown on Map 2-2. Samples were taken September 2001 by Patrick Collins of Mt. Nebo Scientific. Brigham Young University Soil and Plant Analysis Laboratory analyzed the samples for pH, Electrical Conductivity, SAR, and CaCO3. (The Division agreed that a simple test of EC and pH could be done of the soils at T-1, T-2, and T-3 to gather acidity information.) The information supplied indicates that pH of the surface fill has not been adversely affected by coal. Values reported for pH, EC, and SAR reflect the quality of the imported fill.

Appendix 5-5, page 28 indicates that the Colluvial Growth Material stored in the coal pad was covered with a 4 – 6 inch cap layer of road base. The chemical qualities of the road base are reported in Chapter 2, Appendix B of Appendix 2-5, of the MRP.

Next year's sampling should extend deeper into the fill, to sample the CGM below the road base cap.

The C1/C2 form indicates that the "Annual Soil Monitoring at the West Ridge Mine, Utah 2001" report is to be filed with Appendix 2-6 of the MRP, rather than with the 2001 Annual Report.

Findings:

The supplied information brings West Ridge into compliance with this requirement of the Mining and Reclamation Plan.

RULES INDEX

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