0012

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

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

Michael O. Leavitt
Governor

Lowell P. Braxton
Division Director

September 1, 1998

TO: File

THRU: Joe Helfrich, Permit Supervisor
Daron Haddock, Permit Supervisor

FROM: Peter Hess, Reclamation Specialist III

RE: **Addendum to Review of Chapter 5**, R645-301-500 Engineering, West Ridge Resources, Inc., West Ridge Mine, PRO/007/041, Folder #2, Carbon County, Utah

SUMMARY:

The following analysis is an addendum to cover topics which were not covered in the original technical analysis document for the West Ridge Resources, Inc., permit application package. These concerns were aired by Division personnel on August 17, 1998.

TECHNICAL ANALYSIS:

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

EXISTING STRUCTURES AND FACILITIES MAPS

The location and dimensions of existing areas of spoil, waste, coal development waste, and noncoal waste disposal, dams, embankments, other impoundments, and water treatment and air pollution control facilities must be shown within the proposed permit area.

Analysis:

Based on this individual's knowledge, there are no existing areas of spoil, waste, coal development waste, or noncoal waste disposal areas within the proposed permit area. If it has not already been done, the permittee will need to address this issue.

The Grassy Trail Reservoir is an existing impoundment within the proposed permit area. This reservoir is clearly indicated on Map 5-2, Surface Ownership Map, Map 5-3, Subsurface Ownership Map, Map 5-4A, Mining Projections, and Map 5-4B Mining Projections. Longwall mining is anticipated to occur in the Grassy Trail area in 2017. The location of the impounding embankment (latitude and longitude) and the dimensions of same (water storage volume, length, width, surface acres) are not noted on the map.

There are no existing water treatment or air pollution control facilities within the proposed permit area. The permittee will need to address this.

Findings:

The permittee needs to incorporate an "Existing Structures and Facilities Map" into the PAP giving the latitude and longitude of the existing Grassy Trail Reservoir impounding embankment (spillway location is probably acceptable). The maximum available water storage volume, and dimensions of same need to be shown on the map. This information is easily available from the Utah Division of Water Rights, State Engineer's Office.

The permittee needs to verify that none of the facilities, as mentioned above with the exception of the Grassy Trail Reservoir, exist.

MINE WORKINGS MAPS

Location and extent of known workings of active, inactive, or abandoned underground mines, including mine openings to the surface are within the proposed permit and adjacent areas. Location and extent of existing or previously surface-mined areas are within the proposed permit area.

Analysis:

Map 5-4A, Mining Projections of the proposed West Ridge Mine indicates that the development of bleeder entries for longwall panels 15, 16, and 17 will mine to within 250 feet (laterally) of the entries developed by Kaiser Steel Corporation as part of the "B" Canyon motor road extension, (Sunnyside #1 Mine). The bleeder entries which lie SW of the set-up rooms for these same panels will come within 350 feet of 4th slope, (bleeders for 13 Lt., 16Lt., 17 Lt., 18 Lt., and 19 Lt. longwall panels). In order for Andalex to develop panels 9, 10, 11, and 12, (to be extracted during 2004 and 2005, based on Map 5-4A) it will be necessary to cross old works ("B" Canyon Dips) with three different sets of entries.

There are no known existing or previously surface-mined areas within the proposed West Ridge Resources permit area.

The permittee must include what maps are available from the adjacent Sunnyside Mines in order to meet the requirements of this regulation. Suggestions might include:

1) The 1"=500 feet map of the #1 and #3 Mines underground workings
2) Plate VII-3, Water Resources Map
3) Plate VI-1, Map 783.14a, Hydrogeologic Map, Sunnyside, Utah Area
4) Other maps the permittee feels are relevant

SLIDES AND OTHER DAMAGE

Regulatory Reference: 30 CFR Sec.817.99; R645-301-515.

Analysis:

Page 5-4 of Volume 2 of the West Ridge Resources, Inc. permit application package addresses the following R645 regulations:

1) R645-301-515.100 - the PAP commits to informing the Division and complying with any mitigation measures necessary to alleviate any adverse effects of landslides which may have an effect on public property, health, safety, or the environment. This meets the requirements of the R645 regulations.

2) R645-301-515.200 - the PAP commits to informing the Division when potential hazards exist with any water impounding structure within the permit area. This notification will include any emergency procedures formulated for public protection, the remedial action necessary to mitigate the hazard, and the notification of the permittee's officials responsible for taking action.

3) R645-301-515.300 - the PAP commits to informing the Division of temporary cessation of mining and reclamation operations before occurance and as soon as the temporary cessation will extend beyond the thirty days. The commitment meets the requirements of the R645 rules.

Findings:

The PAP adequately addresses the requirements of R645-301-515, Reporting and Emergency Procedures.

SIGNS AND MARKERS

Regulatory Reference: 30 CFR Sec. 817.11; R645-301-521.200, -521.240, -521.250, -521.260, -521.270

Analysis:

Page 5-9 of Volume 2 of the West Ridge Resources, Inc. Permit application package addresses the requirements of these rules.

1) **R645-301-521.200, Signs and Markers Specifications**
Page 5-9 started to address this requirement but for some unknown reason, jumped into verbiage required to address permit identification signs. 521.200 is a minimum regulatory requirement that needs to be addressed.

2) **R645-301-521.240, Mine and Permit Identification Signs**
Page 5-9 of the PAP addresses this requirement under 521.200 Signs and Markers. This is merely a mix up, but it needs to be corrected. The verbiage enclosed under 521.200 adequately addresses the minimum regulatory requirements of 521.240.

3) **R645-301-521.250, Perimeter Markers**
Page 5-9 commits to clearly marking all mining related disturbances prior to the initiation of any activities; this meets the minimum regulatory requirement.

4) **R645-301-521.260, Buffer Zone Markers**
Page 5-9, 521.260 (there is no heading indicating that this paragraph addresses buffer zone markers) discusses buffer zone signs, but the verbiage needs to be tuned up. Based on Map 7-2, Mine Site Drainage Map, both the left and right forks of "C" Canyon will be culverted (if approved by the Division) to bypass the undisturbed flows (when and if they should occur) through the mine yard disturbed area to the unimpacted drainage outside of the disturbed area perimeter. Verbiage commiting to placing a stream buffer zone marker at the lower end of the mine yard is in place; however, in consideration of the fact that the right fork of "C" Canyon is classified as an intermittent drainage by regulatory definiton, a stream buffer zone sign should also be placed in the right fork above the mine yard disturbed area, (see R645-301-521.261).

5) **R645-301-521.270, Topsoil Markers**
Page 5-9 commits to clearly marking stockpiled topsoil materials. This meets the minimum regulatory requirements of the R645 rules.

Findings:

Page 5-9 of the PAP adequately addresses the minimum regulatory requirements of the R645 rules regarding disturbed area perimeter markers and topsoil storage area markers.

Page 5-9 of the PAP needs some minor clarification regarding signs and markers specifications, mine and permit identification signs, and buffer zone markers. Some verbiage needs tuned up; an additional stream buffer zone marker needs to be committed to in the upper right fork to meet the requirements of R645-301-731.620.

The minimum regulatory requirements for **Signs and Markers** as submitted in this PAP have not been met.

USE OF EXPLOSIVES

Regulatory Reference: 30 CFR Sec. 817.61, 817.62, 817.64, 817.66, 817.67, 817.68; R645-301-524.
Analysis:

On page 5-12 of the submitted permit application package, the permittee commits to the fact that it may be necessary to use surface shots during the construction phase of the proposed West Ridge Mine. Once construction is completed and coal removal is actively engaged, no surface shots (at least in excess of the five pound limit) should be necessary. The five pound limit (this constitutes ten sticks of dynamite) is by industry standards a large shot and it is extremely doubtful that any incident within the surface area of an active coal mine would require this kind of explosive force. Blasting regulations have been addressed in the following manner:

1) **R645-301-524. Blasting and Explosives**
Based on the analysis of Map 5-4A, Mining Projections, the construction of the West Ridge Mine facilities in the lower and upper left and right forks of "C" Canyon will come no closer than 1600 feet to the Sunnyside #1 Mine motor road extension. Therefore, no surface blasting approvals from MSHA for the construction phase of the Mine are necessary.

2) **R645-301-524.100 Blaster Certification**
Page 5-12 of the PAP has not described the steps taken to achieve compliance with the blaster certification program. They have addressed the requirements of 524.110 under 524.100 in the PAP.

3) **R645-301-524.110. Shot Management by Certied Surface Blaster**
The PAP has addressed the requirement mandating that all surface blasts at the West

Ridge Mine will be conducted under the direction of a UDOGM certified surface blaster. This meets the minimum regulatory requirement.

4) **R645-301-524.120. Blaster Certifications on File at Mine**
The PAP addresses the mandate that certificates of blaster certification will be on file in the permit area for the individuals responsible for conducting the shots. This meets the minimum regulatory requirement.

5) **R645-301-524.130. Two Persons Required at the Firing of a Shot**
Page 5-12 of the PAP commits to having a certified surface blaster and at least one other individual present at the firing of all surface shots. This meets the minimum regulatory requirement.

6) **R645-301-524.140. Familiarity with Site Specific Approved Blasting Plan**
Page 5-12 commits to requiring that the certified surface blaster responsible for the shot will be familiar with the approved blasting plan and site-specific performance standards. This meets the minimum regulatory requirements of the R645 regulations.

7) **R645-301-524.200. Submittal of Blast Designs**
Page 5-12 of the PAP commits to submitting blast designs for shots requiring more than five pounds of explosives to the DOGM for prior approval. A blasting schedule will also be submitted to the DOGM for these activities. The blast design will be prepared and signed by the certified surface blaster responsible for the shot.

The "C" Canyon project is a proposed underground mine; it is extremely doubtful that shots requiring more than five pounds of explosive will ever be necessary once construction activities have been completed. The closest abandoned underground mine is the old Sunnyside #1 Mine motor road extension which is 1600 feet away. There are no known dwellings, schools, etc. within 1,000 feet of the "C" Canyon facilities area. However, the PAP has committed to submitting the necessary design and schedules should a shot of this magnitude be necessary. The permittee has met the minimum regulatory requirements necessary for the appropriate rule.

8) **R645-301-524.300. Pre-Blast Survey(s) for Structures Within One-half Mile of the Permit Area**
At the present time, there are no dwellings or structures within the permit area. Shots requiring the use of more than five pounds of explosives are extremely unlikely once the construction phase of the Mine has been completed. If structures are built during the active life of the mine, and a shot in excess of five pounds of explosive is necessary, the inspection staff of the UDOGM will require the permittee to comply with the R645 rules

requiring the necessary pre-blast survey. The permittee has met the minimum regulatory requirements for this rule.

9) **R645-301-524.400. Blasting Schedule**
524.430 requires permittees to notify all residents and local government agencies in writing of the proposed blasting activities at least 24 hours prior to the shot(s), listing location(s) and time(s) for same. As no residents or local government agencies exist within one-half mile of the proposed "C" Canyon facilities area (as of 8/98) this rule is not applicable at this time. Upon completion of the construction activities of the Mine, the disturbed area for same will be permanently marked; hence, the disturbed area will not be moved or enlarged (unless through future permitting action). No surface blasting will occur outside of the Mine's disturbed area perimeter throughout its life. The minimum regulatory requirements for this rule have been met.

10) **R645-301-524.500. Blasting Signs, Warnings, and Access Control**
Page 5-13 of the PAP addresses the minimum regulatory requirements of this section. No residents or employment structures exist within one-half mile of the proposed surface facilities disturbance. The application has adequately addressed the use of blasting zone signs, the designation of audible signal used, and access limitation for the protection of livestock and unauthorized persons. The permittee commits to conducting a post-blast survey to determine if a misfire or other hazardous condition has occurred, (on-shift MSHA required examination). The "C" Canyon area is very constricted and has limited access. The minimum regulatory requirements for this section have been met.

11) **R645-301-524.600. Control of Adverse Blasting Effects**
Page 5-13 of the PAP commits to controlling the adverse effects of blasting on the surface within the disturbed area of the Mine during its construction phase. As noted above, "C" Canyon is an elongated, tightly confined area whose physical characteristics will help limit the adverse effects of surface shots. Adequate stemming, as well as the other aspects of the approved blast design are important in eliminating the negative impacts of fly rock, air blast, etc. Although some control can be committed to by the permittee, it is ultimately the responsibility of the certified surface blaster to control negative blasting effects by adjusting his blast design parameters as necessary. Shots which will utilize more than five pounds of explosive after the Mine's construction phase has been completed will be minimal, if not nonexistent. Effects of airblast, fly rock, etc., will similarly be the same. The PAP meets the minimum regulatory requirements for this section.

12) **R645-301-524.700. Blasting Record Maintenance**
Page 5-13 of the PAP commits to maintaining all blasting records at the Mine site for a

period of three years. The records to be retained will meet all blasting record design specifications as determined by R645-301-524.711 through 524.749. As large, frequent shots as used in surface mining for the fracturing of large volumes of overburden are not necessary at this mine, regulations R645-301-524.750 (seismic survey requirements) through 524.760 are not applicable.

13) **R645-301-524.800. Compliance with Utah and Federal Explosive Use Laws and Regulations**
The PAP does not make a commitment to this regulation.

Findings:

R645-301-524.100 requires that the permittee make a commitment to achieve compliance with the surface blaster certification program. The PAP lists 524.100 on page 5-12, but the verbiage discusses a commitment to conduct all surface blasts under the direction of a certified surface blaster, (524.110). This may appear to be the same, but it is not. It is understood by the fact that it is law that the permittee will not conduct a shot without the services of a certified blaster. However, certification and recertification requirements for certified blasters must be committed to under 524.100.

R645-301-524.800 requires that the permittee make a commitment to comply with all Utah and Federal explosive use laws and regulations. This is a minimum regulatory requirement that remains to be addressed.

The permittee needs to address the two areas mentioned above to bring the **Use of Explosives** section of the PAP into compliance.

CESSATION OF OPERATIONS

Regulatory Reference: 30 CFR Sec. 817.131, 817.132; R645-301-515, -301-541.

Analysis:

R645-301-515. Reporting and Emergency Procedures

1) **R645-301-515.100. Commitment to Report a Landslide**
Page 5-4 of the PAP commits to reporting a landslide to the DOGM by telephone, if the slide has a potential adverse effect on public property, health, safety, or the environment.

Required remedial measures mandated by the Division for the mitigation of the slide area

will be complied with by West Ridge Resources, Inc. This meets the minimum regulatory requirements of the aforementioned regulation.

2) **R645-301-515.200. Notification of Potential Impoundment Hazards**
The PAP (page 5-4) commits to notifying the DOGM if any examination or inspection reveals a potential impoundment hazard that warrants initiation of emergency procedures. Part of this notification will be the emergency procedures which have been formulated for public protection and remedial action. Notification of permittee officials responsible for initiation of any necessary remedial action is included in the emergency action plan. This meets the minimum regulatory requirements of the R645 rules.

3) **R645-301-515.300. Procedures for Temporary Cessation of Operations**
Page 5-4 of the PAP commits to the requirements mandated by the aforementioned regulation including the notification of the Division of the exact number of surface acres and the horizontal and vertical extent of subsurface strata which have been in the permit area prior to cessation or abandonment; the extent and kind of reclamation of surface area which will have been accomplished; and identification of the backfilling, regrading, revegetation, environmental monitoring, underground opening closures and water treatment activities that will continue during the temporary cessation.

The permittee commits to supporting and maintaining all surface facilities and all surface access to underground operations. The permittee commits to awareness to the fact that temporary cessation does not relieve any obligation to comply with any provision of the approved permit. The minimum regulatory requirements for 515.300 have been adequately addressed.

Findings:

The permit application package for the West Ridge Resources, Inc. Mine adequately addresses the minimum regulatory requirements of R645-301-515, Reporting and Emergency Procedures.

RECLAMATION PLAN

Regulatory Reference: R645-301-540.

Analysis:

GENERAL REQUIREMENTS AND INFORMATION

The West Ridge permit application package addresses the following rules.

1) **R645-301-541.100. Commitment to Reclaim**
The permit applicant commits to permanently reclaim all affected areas in accordance with the regulations and the approved permit.

2) **R645-301-541.200. Surface Coal Mining and Reclamation Activities**
The permit applicant is not proposing to conduct surface coal mining and reclamation activities. This regulation is not applicable to the PAP.

3) **R645-301-541.300. Underground Coal Mining and Reclamation Activities**
Page 5-44 of the permit application package indicates that the permittee is committed to reclaiming and removing all surface equipment, structures, and other facilities not designated to be left in place in conjunction with the approved post-mining land use; the affected area will then be reclaimed. This meets the minimum regulatory requirement of the aforementioned regulation.

4) **R645-301-541.400. Requirement to Submit a Reclamation Plan for Lands Affected by Mining**
Appendix 5-5 (as indicated on page 5-44) of the permit application package contains the detail and discussion for the proposed reclamation of the **proposed disturbed area.** It is assumed that by this, the applicant is referring to the mine's main facilities area located in "C" Canyon. This statement is not adequate to address the minimum regulatory requirements of 541.400, as this regulation requires the aforementioned plan to address "*the lands within the proposed permit area*", IE, **all affected areas** which have been impacted by mining. Therefore, the rules require that the application address surface areas affected by mining induced subsidence (or by any other means of impact), even though these areas may be outside of the **proposed disturbed area.**

Appendix 5-5 attempts to show how the applicant intends to comply with R645-301-541.400 and the environmental protection performance standards of the Utah program.

Findings:

The PAP does not adequately address the 541.400 requirement, in that only the land affected within the proposed disturbed area has been addressed in the proposed reclamation plan. The regulation requires that all lands affected by mining must have a plan submitted which is suitable to adequately and permanently reclaim them to pre-mining productivity.

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

POST RECLAMATION SURFACE FEATURES WITHIN THE PROPOSED PERMIT AREA

Regulatory Reference: R645-301-542.320.

The aforementioned regulation requires that "the location of each facility that will remain on the proposed permit area as a permanent feature, after the completion of coal mining and reclamation operations" be shown on a map or plan. Minimum regulatory requirements mandate that the map or plan must show:

1) the location of all buildings in, and within 1,000 feet of the proposed permit area.
2) the location of surface man-made features within, passing through or passing over the proposed permit area, including, but not limited to:
   a) major electric transmission lines,
   b) pipelines,
   c) fences,
   d) agricultural drainage tile fields,
   e) each public road located in or within 100 feet of the proposed permit area, and all roads within the proposed permit area which are to be left as part of the proposed post mining land use.

Analysis:

Page 5-48, Regulatory Reference 542.300 indicates that no facilities will remain in the permit area as permanent features.

Page 5-48, Regulatory Reference 542.600 indicates that the Carbon County access road will be left in place as permanent access to public lands. This is a part of the approved post-mining land use being applied for.

Map 5-9, Mine Site Reclamation Map, shows the 1000 feet of Carbon County road to be left which is inside the disturbed area of the mine site. This 1000 feet, plus the additional 250 feet of County road which is outside of the DAB, but inside the permit area, are shown on Map 5-2, Surface Ownership Map. The 69 KV power line (which is outside of the Mine permit area), and about 1500 feet of jeep trail that crosses portions of West Ridge Mine permit area are also shown on this map.

The two features which will remain post mining are 1500 feet of twin wheel track jeep road on top of West Ridge, and 1250 feet of Carbon County road inside of the mine's permit area. The PAP clearly indicates that the Country road will be left within the permit area, and it is shown on Map 5-9, Mine Site Reclamation map. This map is adequate, although the permittee should address 542.320 by referring to Map 5-9 in the text.

Findings:

The permit applicant should address the requirements of 542.320 by referring to Map 5-9, Mine Site Reclamation Map, as well as addressing the jeep road on top of West Ridge. Map 5-9 is adequate to meet the minimum regulatory requirements of this section.

RECLAMATION SUBSURFACE MAN-MADE FEATURES MAP

Regulatory Reference: R645-301-542.320

Analysis:

Subsurface features maps must include buried telephone lines, the six inch water line from East Carbon City to the Mine, and gas lines which cross over or through the mine's permit area. Reclamation of the approximate 30 acres of disturbance in "C" Canyon for the Mine facilities will remove the aforementioned utilities. It is not known, at this time, if the various surface owners (who will grant the rights-of-way for the various utilities outside of the Mine's permit area) will want the various utilities to remain. At this point, we essentially don't know what will be left in place; it might be wise to require the applicant to commit to meeting this regulation as a stipulation for permit approval.

Findings:

Essentially, all subsurface man-made features within the Mine's DAB will be removed upon reclamation of the site. There are no known gas pipelines, telephone lines or other utility features within the Mine's permit area at this time (as of 9/1/98). This may change during the

next 20 years. The permittee should be required (by stipulation for permit approval) to provide this information, (should any utilities cross the Mine's permit area) as permit renewals are granted. This map, as required by R645-301-542.320 is not necessary to be submitted in this PAP for permit approval.

tam
cc: Robert Davidson
O:\007041.BCN\FINAL\WSTTA#2.PHH