

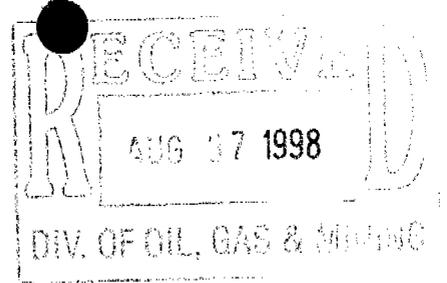
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State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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August 4, 1998

To: File

Thru: Joe Helfrich, Permit Supervisor-Compliance
Daron Haddock, Permit Supervisor-Permitting

From: Peter Hess, Reclamation Specialist III *PH*

RE: West Ridge PAP, West Ridge Resources, Inc., West Ridge Mine, PRO/007/041, Folder #2, Carbon County, Utah

SUMMARY:

West Ridge Resources, Inc., (Andalex Resources, Inc., affiliated with Intermountain Power Agency) is proposing to permit an underground coal mine in the "C" Canyon area NW of the old Sunnyside Mine at Sunnyside, Utah.

The following is a review of Chapter 5, R645-301-500 Engineering for the West Ridge Mine permit application package.

TECHNICAL ANALYSES:

OPERATION PLAN

R645-301-526.200 Utility Installation and Support Facilities

RECLAMATION PLAN

R645-301-541.300 Retention of Surface Structures as Part of Approved Post Mining Land Use

Analysis:

Chapter 5, page 5-8, 521.160 and page 5-27

Map 5-5, Surface Facility Map shows the 69 KV power line entering the West Ridge disturbed area boundary 50 feet west of the west side of the truck loadout loop. It then enters the DAB for 220 feet, exits same for 40 feet, and then re-enters the DAB and travels ENE to the substation.



The powerline cannot just jut in and out of the disturbed area boundary. The sediment control for the support structures (whether they are SAE's or not) must report to the sediment ponds, as must all disturbed area runoff. In Table 2, Demolition Cost Estimate in the submitted PAP, the permittee is committed to reclaiming the substation and 700 feet of 69 KV line within the DAB. Although the line is on the Mine's property, it will be installed and maintained by the local utility company, (see page 5-27, paragraph j, Electrical power). Based on this, it is assumed that UP & L will maintain ownership of the line as well. If the permittee is to reclaim this line, an agreement must be in place between UP & L and West Ridge Resources, Inc. to allow them to do so. Verbiage discussing exactly what portion of the power line is to be reclaimed should be included in the text. The agreement should be included in the MRP.

The construction of the power line will impact the following acreages as managed by their respective agencies:

- 1) 70 acres of surface disturbance are managed by the USBLM
- 2) 5.48 acres of surface disturbance are managed under Utah SITLA
- 3) 10.04 acres are privately owned.

Easements in perpetuity need to be negotiated and included in the MRP in order to relinquish the reclamation responsibilities overseen by the Division. The power line and water line are being installed for the sole purpose of servicing the proposed mine, therefore the reclamation requirements of SMCRA must either be met or suitably overshadowed by acceptable agreements issued by the managing surface management agencies.

The reclamation plan of this PAP discusses the removal of all structures, plus the removal of the Canyon fill material as part of returning the area to AOC. As part of the reclamation plan, Table 2, Demolition Cost Estimate shows that the substation will be reclaimed prior to removing the fill material in this area. The permittee is proposing to backfill 92,000 cubic yards of fill in the underground entries prior to sealing. In order to do this, MSHA will require ventilation of the mine as long as the backfilling is proceeding. How does the permittee intend to provide continued adequate ventilation of the Mine during the backfilling process (i.e., with the fan and power line facilities removed)? Map 5-9, Mine Site Reclamation shows the 69 KV line removed in its entirety, (i.e., including the structures owned by UP & L.).

Page 5-28, paragraph K, Water Facilities

"Water will be delivered to the site by a 6" pipeline originating in East Carbon City." Is it to be reclaimed? Is it to be included as part of the approved post mining land use? Regarding the retention of this line, the following acreages are impacted and, as such, must have approvable or agreed to post-mining land use agreements in place from the respective surface management agencies. The acreages to be impacted by the water line include:

- 1) 7.34 acres managed by the USBLM.
- 2) 1.98 acres managed by the Utah SITLA.
- 3) 0.96 acres which are the responsibility of the Utah DOT.
- 4) 4.73 acres which are privately owned.

Again, the tenure of the easement agreements from the different surface management agencies needs to be determined. The retention of the waterline as part of the approved post-mining land is not approvable if perpetual lease agreement(s) is/are not approved by the SITLA and the USBLM.

Also, I think we need to be realistic here in that, if a dry year prevails, will the mine be shut down for lack of water? East Carbon City cannot sell something it does not have. Citizens of the East Carbon/Sunnyside area have battled for years over sufficient water to keep cattle alive. Sunnyside Cogeneration Associates has fought over sufficient water to make power since it's inception. The permittee should consider other means of obtaining an adequate volume of water with which it can operate the mine.

It is understood that the Carbon County public road will remain as a part of the post mining land use, at least if the Bureau of Land Management is in agreement to providing this public access to their ownership.

The issue regarding the 69 KV Utah Power and Light powerline and the six inch water line from East Carbon City to the mine needs to be addressed as to whether they are to remain as part of the approved post-mining land use. Both are being installed solely for the purpose (at least at this time) to provide service to the new West Ridge Mine. The documentation to retain these structures as a part of the post-mining land use must be in place prior to the issuance of the mine permit.

The submittal, as it currently exists, does not adequately address the requirements of the needed reclamation plan regarding the utilities to be installed to service the Mine.

Findings:

This permit application package is inadequate regarding the reclamation issues for the six inch East Carbon City water line and the 69 KV power line which is to be installed to provide service to the Mine. Also, an agreement which gives West Ridge Resources, Inc. the authority to reclaim that portion of the 69 KV line which lies within the DAB must be incorporated into the plan, or an agreement which indicates that the portion of the 69 KV line within the DAB belongs to West Ridge Resources, Inc. must be included in the plan.

SEDIMENT CONTROL MEASURES

Page 5-30, paragraph 3
Regulatory Reference R645-301-742 - Sediment Control Measures

Analysis:

“Prior to beginning installation of the bypass-culvert system, interim (temporary) sediment control measures (sediment traps, berms, silt fences, and straw bales) will be constructed in the drainage near the downstream end of the proposed mine yard area. These features, which will treat disturbed area runoff, will be installed as temporary measures to control sediment during installation of the bypass culvert system.” No designs exist for these temporary sediment control measures. Is the area within the DAB (as shown on Map 5-5) sufficient to implement these designs? Similarly, no designs could be found for the sediment basins which

are to be implemented in the main Canyon drainage post pond. A maintenance plan needs to be incorporated along with these designs to ensure that they will continue to function at least until Phase 2 bond release is granted.

It is this inspector's thinking that a sediment control plan be devised which will leave the undisturbed bypass culvert in place under the sediment ponds (in other words, the ponds will be left in place for sediment control until phase 2 bond release is granted for the left fork, right fork, and main canyon areas above the ponds). The ponds could then be removed as well as the remaining undisturbed bypass culvert. Although this means additional cost for the permittee (i.e., mobilization/demobilization plus construction, regrading and revegetation costs), the concept is worth evaluating.

Page 5-24, paragraph b, Sediment Pond
Regulatory Reference R645-301-742.223

"The lower pond will also be equipped with an open channel emergency spillway." Pond "C" is the lower pond. The open channel spillway (as shown on Map 5-5, Surface Facilities Map) terminates in the NE corner of the office parking area, where it then discharges into an offshoot of the undisturbed bypass culvert. At this point, the open channel spillway is no longer effective, by definition.

Map 7-2, Mine site drainage map, shows the runoff from undisturbed watershed UD-Za flowing NW where it discharges into the same undisturbed bypass culvert. If the riprapped open channel is continuous along the NE edge of the parking area to the point where it can discharge into the natural drainage, then the open channel spillway requirement has been fulfilled. Also, the runoff from UD-Za can flow into the channel, thence to the natural drainage.

The permitting of the parking area as an ASCA, (ASCA-Z) does not utilize the best technology currently available. Pond "C" is adjacent to the parking area. The parking lot drainage should be designed to use the sediment pond as it's method of treatment. Using an ASCA to treat hydrocarbon contaminated (automotive fluids) runoff and road salts, etc., is not sound environmental engineering. The permittee may want to consider moving the parking area above the ponds.

The flow in UD-Zb (as depicted on Map 7-2, Mine Site Drainage Map) is shown to terminate near the west corner of the parking lot ASCA-Z. Is there a culvert under the road here or does the flow run across the road uncontrolled? This flow is within the DAB.

A plan for the treatment of potentially contaminated mine water (this will be a longwall operation utilizing water soluble emulsion) needs to be addressed. Mine water will be discharged from UPDES point #2 to the "C" Canyon drainage. The interception of mine flows may change the classification of this drainage.

Analysis:

The PAP lacks the necessary designs for pre-pond and post-pond sediment control; also, several items of the operational hydrology portion need to be addressed. The submittal is inadequate.

Findings:

The permittee needs to address the deficiencies noted above by meeting the requirements of R645-301-742.

Air Pollution Control Facilities

Page 5-31, 526.400 - Air Pollution Control Facilities, Paragraph "J"
Regulatory Reference R645-301-526.400

"the truck loop/loading area will be broom swept and/or water flushed as needed;"

Let's get realistic here; labor is one of, if not the most expensive commodity incorporated into the production of a ton of coal. Broom sweeping is not a cost effective means for maintaining the control of fugitive dust. Water flushing requires repetition, but can cover a much larger area and does a better job.

The permittee may want to consider a sediment trap (similar to the arrangement at SUFCO) to catch coal fines pre-pond and give FEL operators a place to pick up water for re-dispersal in the coal yard. This will accomplish two things: 1) allow fines to settle out in advance of Pond "A", and 2) allow for the re-use of water, which may be a precious commodity at this site.

Analysis:

The previous thoughts are merely suggestions by this individual and by no means are intended to fully cover the scope of fugitive dust control within the DAB. Air pollution control facilities will be determined by the air quality approval order issued by the State of Utah, Department of Environmental Quality, Division of Air Quality. It is the permittee's responsibility to apply for the approval order which will allow them to generate and control fugitive dust at the mine site.

Findings:

When the permittee applies for and receives an air quality approval order from the Utah Division of Air Quality, the requirements of the R645 regulations will have been met. The AO should be included in the MRP when received for inspection purposes.

OPERATION PLAN

Snow Removal and On Site Storage Plan

There is nothing in Chapter 5 of the PAP which addresses this issue. At a minimum, snow storage areas should be shown on a disturbed area map of the site. As the mine site is very small in disturbed area acreage, snow storage could easily become a critical issue.

COAL MINE WASTE

Mine Development Waste

Page 5-34, R645-301-528.320

Specifically 528.322 - "No refuse piles are being proposed."

Page 5-35, R645-301-528.340 - "Underground development waste"

"Underground development waste will not be stored in surface excess spoil piles (no surface excess spoil piles are being proposed)."

Page 5-43, R645-301-536 - COAL MINE WASTE

"No underground development wastes from the underground mine workings will be disposed of on the surface."

The permittee has stressed since the inception of the West Ridge Mine idea that no refuse will be generated, stored or disposed of within the permit area. The construction of overcasts, and belt transfer points will require the taking down of primary roof (average mineable thickness of the Lower Sunnyside is approximately eight feet, see page 5-19, paragraph 2). If it is the permittee's intent to store this material in "gob" rooms underground, then approval from MSHA and the Division must be obtained, (see R645-301-513.300). Page 5-1, 513.300 does not address the storing of mine development waste underground, nor does it discuss the seeking of an approval from MSHA to do so. Secondly, the development of the outcrop area is bound to generate some coal and roof material that will not be of saleable quality. What does the permittee propose to do with this? It is this inspector's recommendation that the permittee, at least, permit a temporary storage site within the facilities area; from that point, it can at least have some time to determine a final deposition point for this material without delaying the mine construction activities. An alternative for final deposition may be to establish an agreement with Sunnyside Cogeneration Associates for disposal; however this must be agreed to by the DOGM through proper permitting action.

Page 5-23, paragraph 2, indicates that "material generated by face up work in the portal area will be used to construct a mine pad area." R645-301-528.340 requires, that at a minimum, the following regulations be addressed if Division approval is to be received in order to do this:

- 1) R645-301-412.300, Suitability and compatibility requirements for reclamation and revegetation. The permittee must commit to testing this material to indicate it's acid and toxic forming potentials. The permittee is proposing to leave the site's existing topsoil (or plant growth medium) in situ and protect it by laying down a geotextile material. They also indicate that they want to use coal mine waste generated during the face up of the portal area as fill. It would seem that some protection should be warranted (i.e., a layer of clean fill (borrow area material) to segregate the mine waste from the topsoil is warranted. Hence the requirements of R645-301-536.300 et seq. must be met.
- 2) R645-301-514.100, Inspections of fills during construction.
- 3) R645-301-745.100, Disposal of excess spoil, General Requirements.

A map indicating where this mine development waste will be placed within the pad must be included as part of the plan, (R645-301-512.200).

Fill Material

The off-site borrow source (commercial or private) needs to be better clarified. At the time of the initial writing of this document, information contained in the environmental assessment as prepared by the USBLM for the "C" Canyon Mine project was not available. The information which exists in that document that is relative to the fill borrow area needs to be incorporated into the West Ridge Resources, Inc., PAP.

RECLAMATION PLAN

Regulatory Reference R645-301-540 - Reclamation Plan

Page 5-44, R645-301-541.400, Paragraph 3

"Excess fill material will be hauled into the abandoned mine entries."

Regulatory Reference R645-301-536.520 - Underground Disposal

In order to accomplish the backfilling of the anticipated 92,000 cubic yards of fill, using the mine conveyor system in reverse to transport the material to the disposal area, MSHA will require the permittee to operate the mine as if it were still in the coal production mode. Operation of the ventilation system will be mandatory, as will required examinations of the mine. The Division and MSHA approved plan must show a map of the underground workings showing the storage volume required to backfill the 92,000 cubic yards.

Table 5-1, page 5-46 shows the removal of structures in the portals/highwall area prior to hauling pad material underground. The permittee should consider by what means the mine fan and the belt drives will be powered, and possibly revise the reclamation time line. (In order to remove the fill from four of the conveyor support structures, i.e., fill removal of pad to return it to AOC), it will be necessary to relocate a belt drive to the #4 portal area pad).

Page 5-52, Spoil and Waste, 553.200

"Excess fill material will be hauled off site or disposed of in the abandoned mine workings."

This is an entirely new twist. How does the Division view this fill material? Obviously, if you consider the fact that it will be in place for 20 years, some contamination (oils, hydraulic fluids, fuel spills, etc) will have taken place. This fill should be disposed of as the spills occur in a State certified landfill.

Can the material, that is in place at time of reclamation, be viewed as "clean"? Should the top 12 inches be disposed of as contaminated material? If the approval is given from the Division to haul fill off site, what approved area is the permittee considering? Is the approved area something that can be determined at the time of reclamation?

Table 1, Reclamation Cost Survey

Underground storage of fill material @ \$159,999 is not an accurate figure. This figure is only the material hauling cost. Mine operation costs must also be figured in. As noted above, approval to do this must be obtained from MSHA prior to DOGM approval, (R645-301-513.300). A more detailed cost analysis for this procedure must be made and included as part of the reclamation bond costs.

SUBSIDENCE CONTROL

Regulatory Reference: R645-301-332

Analysis:

Chapter 3 has general comments about the mining methods and anticipated effects of subsidence, but Chapter 5 has more detail and mitigation commitments. Longwall mining methods will be employed for secondary extraction; subsidence will generally be a broad lowering effect of the surface over the mined panels. Coal pillars will be left in place to protect drainages. Barrier pillars will protect escarpments.

The West Ridge area has generally been used for cattle grazing and wildlife habitat. The PAP states in Section 525.100 that there is no agriculture or silviculture in or adjacent to the area and that there is no food or fiber production within the permit area.

It appears that the applicant is referring to crop production rather than agricultural production, but "grazing is an agricultural activity that produces food. Statements in this and other sections of the PAP indicating that there is no agricultural activity or food production within the proposed permit area need to be modified.

Mitigation measures may include the regrading of the surface on grazable lands where accessible, fencing to restrict access, and restoration of adversely affected roads and trails. The two springs which supply the water on West Ridge for grazing are minimum in volume (less than .5 GPM as I recall). Drought years reduce these flows to almost zero. The PAP should include a commitment to supply water to the area being grazed should it be established that mining under the area has impacted the flows to the springs, (see R645-301-525.160 and 230 et seq.).

Regulatory Reference: R645-301-525.140 - Monitoring

There is no anticipated method of monitoring the subsidence induced from the extraction of coal in the area. The mine will be developed in the Lower Sunnyside seam which pitches at approximately 13 percent grade. The development under the West Ridge area will take place under a maximum of 2,500 feet of cover. In checking Plate #5A, Mining Projections, it appears that the mining of Federal lease SL-068754 will not intercept any canyons where subsidence monitoring locations can be installed. Additional leases (if obtained) as indicated from Plate #5B, Extended Reserve Mining Projections will undermine the left hand fork of Whitmore Canyon above the Grassy Trail Reservoir. At a minimum, the permittee should include a map or verbiage committing to install a monitoring plan

in accessible areas in advance of mining as part of the PAP. If other means of monitoring subsidence under deep cover are known of or become available, the permittee should commit to utilizing same.

A commitment to monitor subsidence locations annually (after secondary extraction is initiated) must be included as part of the plan.

Findings:

Information provided in the application is not considered adequate to meet the aforementioned sections of the R645 regulations. Prior to approval, the applicant must provide the following in accordance with:

R645-301-322; In a few locations, the application says there are no agricultural activities in the proposed permit area. These statements need to be modified since grazing is considered an agricultural activity that produces food.

R645-301-332; The applicant needs to commit to compensate for any grazing animals lost as a result of mining induced subsidence.

R645-301-525.231; The applicant needs to commit to replacing water quantities impacted as a result of mining induced subsidence.

sd
cc:

Bob Davidson, DOGM, SLC