



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

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TO: File

THRU: Daron Haddock, Permit Supervisor DRH

THRU: Robert Davidson, Team Leader RAD

FROM: Wayne H. Western, Senior Reclamation Specialist WHW

RE: Review of the West Ridge PAP with Emphasis on Reclamation Cost Estimates, West Ridge Resources, Inc., West Ridge Mine, PRO/007/041, File #2, Carbon County, Utah

## BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

### Analysis:

#### Form of bond. (Reclamation Agreement)

The Applicant did not discuss the form of the bond or submit a reclamation agreement to the Division. An applicant usually submits the bond for inspection after the permit has been approved but before it has been issued. Therefore, no action is needed at this time. However, the Applicant is reminded that the reclamation agreement must be in place before the permit is issued.

#### Determination of bond amount.

The Division will determine the reclamation cost estimate based on the requirements of R645-301-830.120, R645-301-830.130, and R645-301.830.140. R645-301-830.120 requires that the reclamation cost estimate be based on the approved reclamation plan. The Division identified deficiencies in the backfilling and grading plan that prevent the Division from calculating the reclamation cost. The backfilling and grading plan is presented in Section R645-301-553 of the PAP and on Map 5-12 Reclamation Sequence.

#### Step 1:

- a. Remove all structures, concrete, asphalt, etc.; haul to approved disposal facility. For clarification the Applicant should state that concrete and asphalt debris can be

disposed of on-site rather than taken to a disposal facility. The Division approves the plan to demolish the structures and dispose of the debris. Inert material such as concrete and asphalt can be buried on-site. Other noncoal waste will be shipped to a state approved landfill.

- b. Remove the cap layer and all other potentially contaminated material; haul to approved disposal facility. The Division is concerned that the surface material could be contaminated. The most likely contaminants are salt and oil. The Division approves the concept of the general disposal plan but needs specific details about the plan. The Applicant needs to identify:
  - those areas that will have a protective cap
  - the thickness of the cap (volume of material)
  - the location of the disposal facility
- c. Pad removal work can utilize heavier machinery such as dozers and loaders. If the cap material will be used as backfill the Division may assume that scrapper will be used. Scrapers have been used effectively in several coal mine reclamation projects. If both methods are feasible, the Division will use the least costly method.

## 2. Remove Excess Pad Fill

- a. Remove the excess pad fill (predominantly imported material), for purposes of calculating the bond the Division will assume that the material will be shipped to a commercial pit. The Division needs to know the haul distance, travel time to a commercial pit that would be willing to accept the fill material at no cost. The Division also needs the Applicant to confirm that a commercial pit will accept the fill material during the midterm reviews and permit renewals.
- b. Remove coal mine waste material; haul to approved disposal facility. The Applicant has not identified the approved disposal facility for the coal mine waste. R645-301-528.320 requires that all coal mine waste be disposed within a permit area that is approved by the Division. Options for the Applicant are to ship the material to an approved disposal facility or develop an on-site disposal facility. The disposal site would have to meet the requirements of R645-301-536. An on-site disposal facility could be constructed as part of the backfilling and grading plan. Note, commercial disposal sites such as ECDC are not currently permitted to accept coal mine waste.

The Applicant needs to state how the commercial material and native soil will be marked to that the equipment operators can tell what material they are working with.

- c. Fill removal work can utilize heavy equipment such as dozers, loaders, excavators and trucks.
3. Remove Remaining Pad Fill; Backfill Cutslopes
    - a. The Division does not find steps 3-5 and parts of step 7 feasible. When reclaiming steep slopes, the contractor usually must backfill, topsoil and seed in one operation. The reason is that most equipment is not safe to operate along the contour of slopes steeper than 3:1 to 5:1. The efficiency of operating equipment parallel to slopes steeper than 5:1 to 10:1 is too low to be economical. The most commonly used method to reclaim a steep slope is to place the material in lifts. The lifts are used as work stations to place topsoil, boulder and seed. Therefore steps 3-5 are usually combined and sometimes seed is done from the lifts.
    - b. Use trackhoe to perform delicate pad removal near geotextile boundary and maker strip boundary.
    - c. Leave a 12" to 18" working layer over geotextile to protect in-situ topsoil until backfilling is completed.
  4. See comments in step 3.
  5. See comments in step 3.
  6. Remove geotextile from slopes.
    - a. Remove geotextile from the slope and haul to disposal area. The Applicant did not state how much geotextile must be removed. The Division needs to know volume of geotextile to calculate the removal and disposal costs.
    - b. Removing the geotextile is a specialized job that is time and labor intensive. The Applicant must give a detailed plan for removing the geotextile so that the Division can calculate the cost.
  7. Revegetate Reclaimed Slopes.
    - a. The Applicant plans to use the culvert as a staging area for the revegetation work.

- b. The Applicant will roughen the slopes. As stated in Step 3 this operation must be done as part of the backfilling operation in steep slope areas.
  - c. Spray mulch and tackifier over the re-seeded slopes.
  - d. Hand plant containerized stock in preselected areas.
8. Remove Culvert, Restore Channel.
- a. Remove culvert one section at a time, starting at the upstream end; haul to disposal facility.
  - b. Remove backfill and bedding material; haul to approved disposal facility.
  - c. Remove geotextile (in C/T/F areas), haul to approved disposal facility.
  - d. Roughen re-exposed channel banks, revegetate.

**Terms and conditions for liability insurance.**

The Applicant did not address this issue.

**Findings:**

The information provided in the PAP is not considered adequate to meet the requirements of this section. Prior to approval, the Applicant must provide the following in accordance with:

**Form of bond. (Reclamation Agreement)**

**R645-301-860**, The Applicant did not discuss the type of bond that will be posted. That information is usually contained in the reclamation agreement. Until the Division has determined the bond amount and approved the PAP the Applicant does not need to provide the Division with that information.

**Determination of bond amount.**

**Deficiencies in Step 1 of the reclamation plan.**

**R645-301-121.200**, Map 5-12 must be revised so that text states that concrete and asphalt may be disposed of on-site.

**R645-301-542.200**, The Applicant must show or describe the location and thickness of

the cap layer shown on Map 5-12. The Applicant must also state where the cap material will be permanently placed.

**Deficiencies in Step 2 of the reclamation plan.**

**R645-301-542**, Prior to issuing the permit the Applicant must state the location of the commercial pit where the commercial fill will be shipped, the distance from the mine to the pit and the travel time. The Applicant must also commit to provide proof that the pit would be willing to accept the material at no cost during each midterm and permit renewal.

**R645-301-528.320**, Prior to issuing a permit the Applicant must show that all coal mine waste will be disposed in an approved disposal facility.

**Deficiencies in Step 3 of the reclamation plan.**

**R645-301-542**, The Division considers the activities in steps 3-5 and step 7 to be unsafe or unfeasible. Most equipment cannot operate on the contour if the slope is steeper than 3:1 to 5:1. Most equipment cannot move material efficiently on slopes steeper than 5:1. The Applicant must change either the reclamation plan or show that equipment can operate on steep slopes safely and efficiently.

**Deficiencies in Step 6 of the reclamation plan.**

**R645-301-830.140**, The Applicant must state how much geotextile material will be removed. The Applicant must give the Division a detailed plan for removing the geotextile material.

**Terms and conditions for liability insurance.**

**R645-301-890**, The Applicant did not address this issue.