



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

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February 9, 1999

TO: File

THRU: Daron Haddock, Permit Supervisor *DORH*

FROM: Wayne H. Western, Senior Reclamation Specialist *WHW*

RE: Backfilling and Grading Plan for TA, West Ridge Resources, West Ridge Mine
PRO/007/041-98-1, File #2, Carbon County, Utah

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, 301-553, 302-230, -302-232, 302-233.

Analysis:

The backfilling and grading plan for final reclamation is located in Part II of Appendix 5.5. The summary of the backfilling and grading is as follows:

- a. Remove Surface Structures
 - b. Remove Pad Cap Layer
 - c. Remove Excess Pad Fill
 - d. Remove Remaining Pad Fill; Backfill All Cutslopes
 - e. Reclaim Portal Highwall
 - f. Reapply Topsoil to Backfilled Cutslopes
 - g. Re-expose and Revitalize the Left-in-Place Topsoil
 - h. Re-establish the Original Rubbleland Surface
- A. Remove Surface Structures: All coal handling facilities, buildings and ancillary structures will be hauled offsite. Materials which cannot be salvaged or recycled will be disposed of in an approved solid waste land fill.
 - B. Remove Pad Cap Layer: The Applicant and the Division assume that the top 6 inches of material in the disturbed area will become contaminated. The volume of contaminated material is estimated to be 3,722 cubic yards. During reclamation the material will be sent to ECDC to final disposal.
 - C. Remove Excess Pad Fill: During initial construction of the pad area some imported fill will be shipped onsite. Most of the material will be shipped offsite during final reclamation. The Division has approved the disposal of the excess fill material either by placing it underground or

in a commercial borrow pit. The Applicant has approved from the landowner to ship the excess fill material back to the original borrow pit. The Division will calculate the reclamation bond on the assumption that the material will be shipped to a borrow pit or recycling.

The Applicant also has the option of disposing of excess fill underground. The coal rules do not specially address disposal of excess fill underground. However the coal rules do address disposal of coal mine waste underground (R634-301-536.520). Those rules require that the Applicant has MSHA approval. In the PAP the Applicant commits to compliance with MSHA regulations during that operation. Therefore, the Division approved the Applicant plan to dispose of excess fill underground.

- D. Remove Remaining Pad Fill; Backfill All Cutslopes: The Applicant will restore the cut areas to the approximate original contours. All slopes will have a safety factor of at least 1.3. Since some reclaimed areas will have, steep slope topsoil may have to be placed concurrently with backfilling and grading.

Special consideration will be given to disposal of the designated portal face-up material. This material was generated during initial construction when the portal highwall area was being excavated. Weathered and/or burned coal material from the outcrop coal seam was removed and stored in the mine pad fill in a non-structural area above the shop/warehouse facilities. During reclamation this portal face-up material will be uncovered and hauled back to the portal area. This material will be placed within the portals and/or adjacent to the portal highwall and then covered with at least four feet of backfill.

The backfilling and grading plan will meet the requirements of R645-301-553 that require the reclaimed area to achieve approximate original contour requirements and have a safety factor of 1.3.

- E. Reclaim Portal Highwall: Special backfilling techniques will be applied at the portal highwall area, and also at the conveyor nose cut. Of the entire mine site, these are the areas that involve the steepest slope cuts. The pre-existing, pre-mining slopes in these areas are as much as 40° (i.e., nearly 1H:1V). During reclamation the portal area will be reclaimed to the approximate original contour. The highwall will be completely eliminated.

Reclamation of the highwall will be done by utilizing large boulders. Large angular boulders will be stacked one on top of another along the outer edge of the portal bench along the toe of the slope. Fill slopes reinforced with large boulders in this manner can easily stand at the requisite 40° incline needed to reestablish the natural slope. The reclaimed slopes will be similar to existing slopes in the area appear to be stable over a long time.

The reclamation plan for the highwalls meets the requirements of R645-301-522 because the approximate original contours requirement will be achieved, the highwalls will be completely eliminated and the slopes will be stable.

- F. Reapply Topsoil to Backfilled Cutslopes: Topsoil will be placed in the areas that were backfilled and regraded. The topsoil depth will vary from 12" to 18". The surface will be roughed with gouges consisting of imprinting the surface with a pattern of depressions measuring

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approximately 24" wide, 36" long and 18" deep. The purpose of these pocks is to capture and retain water and provide a cradle for seedlings. The backfilling and grading regulations in R645-301-553 do not have specific requirements for topsoil placement.

- G. Re-expose and Revitalize the Left-in-Place Topsoil: Removal of the fill to re-expose the underlying original surface will result in the establishment of appropriate original contours in fill areas. Those areas will be reclaimed to the original contours and will have stable slopes.
- H: Re-establish the Original Rubbleland Surface: Removal of the fill to re-expose the underlying original surface will result in the establishment of appropriate original contours in fill areas. Those areas will be reclaimed to the original contours and will have stable slopes.

Findings:

The Applicant met the minimum requirements of these regulations.

cc: Bob Davidson
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