



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

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TO: Internal File

THRU: James D. Smith, Team Lead *JDS*

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

RE: Ballpark Topsoil Pile, CO-OP Mining Company, Bear Canyon Mine AM01A-2

SUMMARY:

On October 24, 2001, the Division received amendment AM01A-1 for the Bear Canyon Mine. The amendment is to clarify that the topsoil now stored in the ballpark is not needed for reclamation. The engineering issues were covered in revised cut and fill calculations as shown in Appendix 3L, updated reclamation maps and cross sections and revised reclamation cost estimates. A summary of topsoil availability is summarized in Chapter 8. In addition, the Permittee proposes to construct a ditch to prevent water from the undisturbed area above the ballpark from flowing across the ballpark, which is a disturbed area.

TECHNICAL ANALYSIS:

RECLAMATION PLAN

APPROXIMATE ORIGINAL CONTOUR RESTORATION

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-270, -301-271, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

Analysis:

The revised reclamation topography (no topsoil from the ballpark will be used) is similar to the original reclamation topography (topsoil from the ballpark would be used.) The Division compared the approved reclamation contour maps with the proposed reclamation contour maps and found no significant difference with respect to the AOC requirements.

TECHNICAL MEMO

The Permittee also included detailed cross sections that show the operational and reclaimed topography for the Bear Canyon Mine. The MRP does not have such detailed cross-sections, so a direct comparison between the approved and proposed plan is not possible. The cross sections show that all highwalls will be eliminated and that the reclaimed slopes will have a topography that is similar to the surrounding areas. The drainage patterns will remain the same and were found to complement the surrounding drainages.

Since the existing reclamation plan calls for the site to be reclaimed to AOC the Division considers the minor changes to the backfilling and grading plan to be insignificant and that the revised reclamation plan will meet AOC.

Findings:

The Permittee met the minimum regulatory requirements for meeting the approximate original contour requirements.

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, -302-231, -302-232, -302-233.

Analysis:

The Permittee claims that sufficient topsoil exists to reclaim the Bear Canyon Mine without using the topsoil located in the ballpark. See topsoil section of the TA for more details. Because the Permittee will not use the topsoil in the ballpark, they must modify the backfilling and grading plan in order to obtain additional topsoil. The Permittee will have to remove more topsoil or equivalent material from cut areas so that it can be placed on the reclaimed slopes.

The revised cut and fill calculations are shown in Appendix 3-L. A summary of the cut and fill volumes are as follows:

- Coal Storage Waste 4,834 CY
- Sediment Pond Cleanout Material 3,350 CY
- Concrete Debris, 8,041 CY
- Cut and Fill calculations for areas TS-3 through TS-9 balance. The cut and fill calculations for the mine site balance. See Table 3L-1 for details.

Cross sections for area are shown in Appendix 3-L. The revised backfilling and grading plan is designed to eliminate all highwalls. In some areas cut slopes will remain, because of slope stability requirements. Cross sections for the revised reclamation plan are shown on Appendix 3L-1. The cross sections and volume calculations are based on the Plate 3-2 and Plate 2-4.

The proposed backfilling and grading plan is similar to that in the MRP. The Division found that the proposed reclamation site would have all highwalls eliminated. No spoil piles or depression other than minor bowl used for surface roughening will be left. The reclaimed slopes will not exceed either the angle of repose and will have long-term static safety factor of 1.3. In addition, the slopes will prevent slides; minimize slides, erosion and water pollution both on and off the site.

Findings:

The Permittee met the minimum regulatory requirements for meeting the backfilling and grading requirements.

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Analysis:

Reclamation backfilling and grading maps

Plate 3-2 and Plate 8-5 show the proposed reclamation contours. The used those plates to determine that the backfilling and grading plan is adequate.

Final surface configuration maps

Plate 3-2 and Plate 8-5 show the proposed reclamation contours. The used those plates to determine that the Permittee could meet the AOC requirements.

Findings:

The Permittee met the minimum regulatory requirements for meeting the maps, plans, and cross sections for reclamation requirements.

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BONDING AND INSURANCE REQUIREMENTS

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

Analysis:

Determination of bond amount

The current bond amount is for \$1,825,000 in 2005 dollars. The Division's revised calculations are for \$1,870,000 and the Permittee calculations are for \$1,913,000. The reclamation cost increase using the Permittee's calculations amount to an increase of 4.8%. The Division usually does not require the Permittee to increase the bond unless the cumulative amount is greater than 5%. Therefore, the Division will not require a bond adjustment at this time. However, the Permittee should be aware that even a small change in the bond could trigger the 5% rule and bond adjustment would occur.

Findings:

The Permittee met the minimum regulatory requirements for bonding and insurance requirements.

RECCOMENDATIONS:

The Division should approve amendment AM01A-1 for the Bear Canyon Mine, which deals with excluding using the topsoil in the ballpark for reclamation.