



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

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December 11, 2000

TO: Darron R. Haddock, Permit Supervisor *RRA*

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

RE: Centennial Midterm Review of October 4, 2000 Submittal C/007/019-MT99-2

SUMMARY:

On October 4, 2000, the Division received the response to the midterm deficiencies, which consisted of an updated reclamation cost estimate. The Division reviewed the reclamation cost estimate and found several deficiencies with the earthwork calculations. The Division meet with the permittee's consultant, Dan Guy, on December 8, 2000 to discuss the deficiencies. This memo states those deficiencies.

TECHNICAL ANALYSIS:

RECLAMATION PLAN

BONDING AND INSURANCE REQUIREMENTS

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

Analysis:

Determination of bond amount

The Division reviewed the bond calculation submitted on October 4, 2000. During the review the Division found the following deficiencies:

- The permittee did not give the Division mass balance calculations. The mass balance calculations should be shown on OSM's Worksheet 4A and include the topsoil volumes. The interval between cross sections should be no more than 200 feet. The permittee used a 400-foot interval. The

TECHNICAL MEMO

Division needs this information to determine if adequate fill material is on the site.

- The permittee did not give the Division a material handling plan as shown on OSM's Worksheet 3. The Division needs that information to determine what the haul grades and distances are. The permittee assumes that the cut and fill volumes in each cross section are the same. However, the permittee does not provide any data to support that claim. The Division reviewed the current earthwork plan and found that the permittee proposes to push soil up a 30° slope with a dozer. The *Caterpillar Handbook* lists a 16° slope as the maximum slope that a dozer can push soil uphill.
- The permittee must give the Division detailed equipment lists and productivity calculations for the equipment that will be used to reclaim the site. Parts of the site must be reclaimed in lifts or by using other methods that avoid having to haul soil up slopes steeper than 15°.

Findings:

Information provided in the midterm review response is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-830.120, R645-301-830.130 and R645-301-830.140, The permittee must give the Division the following reclamation cost data 1) detailed mass balance calculations based on cross section spaced no more than every 200 feet, 2) detailed haul distances and grade calculations and 3) proper equipment selection for the haul distances and grades. See the analysis section for more details.

RECOMMENDATION:

The permittee needs to address the midterm deficiency before the midterm can be completed. The permittee should be encouraged to contact the Division if they have any questions on how the reclamation cost estimates.