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

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November 14, 1996

TO: Daron Haddock, Permit Supervisor *DRH*

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

RE: Permit Renewal, Bond Calculations, Cyprus Plateau Mining Corporation, Star Point Mine, ACT/007/006, Folder #3, Carbon County, Utah  
*F 10 # 2*

**BONDING AND INSURANCE REQUIREMENTS**

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

**Analysis:**

**Determination of Bond Amount**

The bond calculations submitted by the Operator are a copy of the 1991 bond estimate and the reclamation estimate for the Gentry Mountain air shaft facility. The Operator did not escalate 1991 costs to 1996 dollars or make any other inflation adjustments. The Division has updated the 1991 estimate with 1996 unit costs.

The reclamation cost estimates were divided into earthwork, demolition and vegetation. The earthwork costs appear to be based on equipment costs and productivity. The reference for the equipment costs is not given, but is assumed to be either Bluebook or Means. The productivity for a specific piece of equipment does not change with location or type of work. It appears that instead of calculating productivity for a specific task at a given location the Operator used a generic value. The source of the equipment productivity was not given in the bond calculations.

R645-301-830.130 requires that bond amount reflect the probable difficulty of reclamation, giving consideration to such factors as topography and geology, hydrology and revegetation potential. A generic productivity value does not necessarily reflect the difficulty of reclaiming a mountainous area. The Operator needs to demonstrate that the productivity values used for the earthwork calculations are adequate given the terrain.

The Operator did not include support equipment and personnel for the earthwork. Such support equipment should include but not be limited to a foreman, support vehicles (pickup trucks for transporting men and equipment) water trucks, and AMD survey crews.

crews.

The cost of reclamation can be reduced by proper equipment selection. The Division has no reason to reject the type of equipment that the operator selected, However; the Operator may wish to optimize the equipment selection in order to reduce the bond amount.

The demolition costs were based on the value of the structure, material type and the appropriate unit cost. Missing was the demolition cost for the floors, footings and foundations, and the cost of debris disposal. Inert material such as concrete can be disposed of on the site. Steel can be shipped to a remelt facility. The other materials are usually disposed in an approved landfill. Since the cost of disposing of rubbish in a landfill is \$35 per ton, the Operator may find it advantageous to limit the amount of debris sent to the landfill.

The Operator listed several vegetation activities. The Division has modified some of the activities so that they will conform with unit costs listed in Means. The advantage of using vegetation methods listed in Means is that it is easier to update the unit costs.

The Division is aware that the Operator is updating the reclamation plan to include the elimination of highwalls. When the reclamation plan is updated, the earthwork cost will most likely increase. The Division does not want the Operator to spend time updating the information on equipment productivity. The Division will not require the Operator to update the productivity information at this time. If the reclamation plan is not updated in the near future, the Division may seek for a bond adjustment.

In the 1991 bond calculations the debris disposal costs were not included. The Division is aware that the Operator wants to develop plans for disposal of some inert material on-site and the disposal of steel at a remelt facility. By disposing of the debris in that manner the Operator hopes to reduce the reclamation cost estimate. The Division expects the Operator to develop a debris disposal plan in the near future. Part of the debris disposal cost estimate must include the volume and type of materials used in the construction of the floors, footers, and foundations for each structure. The debris disposal costs should be included in the reclamation plan when the permit is renewed. If the Operator does not submit that information, the Division will have to assume values and base the bond on all debris being shipped to a landfill.

#### **Findings:**

The Operator did not meet the requirements of R645-301-830.130, because the cost estimates do not reflect the difficulty in reclaiming the site given the local topography.

The Operator has not met the requirements of R645-301-830.140. The Operator needs to submit a detailed cost estimate that includes the demolition and disposal cost for each

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structure.

**Recommendations:**

The reclamation bond cost estimate submitted by the Operator should not be approved. The plan does not contain information about the demolition of the floors, footers and foundations or debris disposal. Those items are a significant part of the reclamation cost estimate at any mine and need to be included.

Information about the equipment productivity is related to the earthwork plan. Since the earthwork plan is deficient and needs to be updated to include the elimination of highwalls, the Division should not require the Operator to take any action at this time. Once the highwall issue has been resolved then the Operator must include productivity calculations for all earthwork activities.

Because the Operator is working on updating the earthwork section of the reclamation plan, the Division has chosen not to require that the equipment productivity data be updated until the plan is finalized.

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