



# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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August 2, 1999

TO: File

THRU.: Daron Haddock, Permit Supervisor

FROM: Wayne H. Western, Senior Reclamation Specialist *W#W*

RE: Midterm Review, Andalex Resources, Inc., Centennial Project, ACT/007/019, File #2, Carbon County, Utah

## Summary:

The Division reviewed the reclamation bond for the Centennial Project as part of the midterm review. The Division found the bond calculations and information inadequate. The Permittee must supply the information outlined below. The bond amount will be adjusted after the Division revises the calculations.

## Technical Analysis:

## BONDING AND INSURANCE REQUIREMENTS

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

## Analysis:

### Determination of bond amount.

R645-301-830.100 requires that the reclamation bond be determined by the Division and that the amount reflect the difficulty of reclamation when given such factors as topography, geology, hydrology and revegetation potential. The OSM *Handbook for Calculation of Reclamation Bond Amounts* outlines the procedure for calculating reclamation costs so that the requirements of R645-301-830.100 are met. The Division uses the methods outlined in the OSM to calculate reclamation bond amounts.

The calculations for the current reclamation bond amount are in Section R645-301-800 of the MRP. The costs were originally calculated in 1989 and have not been updated. The methods used to calculate the bond is inconsistent with the Division's current method. The Division cannot calculate the bond amount because of insufficient information. The deficiencies are as

follows:

- **Cut and Fill Material:** The bond calculations must show where cut material will be placed and where fill material will come from.
- **Distances and Grades:** The bond calculations must show the haul distances and grades for all earthwork.
- **Equipment and Productivity:** The equipment types and productivity must be included in the bond calculations. The productivity calculations are usually based on information from the *Caterpillar Handbook*. The Division does not usually use *Means* for earthwork calculations, as was done in the original bond calculations.
- **Demolition:** The Division needs the volume of each structure, the building materials used, the volume of the floors, footings and foundations, and where the debris will be disposed. The Division uses *Means* to calculate demolition costs.
- **Revegetation:** The Permittee must give the Division a detailed estimate of revegetation costs. Those costs must include, soil preparation, seeding, transplants, and fertilizer. The Division uses *Means* for most revegetation costs.
- **An inflation factor:** The Division uses the three-year average of the Means Historical Cost Index. The inflation factor for 1999 is 3.27%. The inflation factor is updated at the midterm and permit renewal.
- **Indirect costs:** Those costs will be supplied by the Division. The indirect costs are usually 30% of the direct costs.

The Division cannot calculate the reclamation bond amount with the information in the MRP. The Permittee must supply the Division with additional information that is outlined above.

The Permittee has any questions about how to calculate bonds they should feel free to contact the Division. The Division will be glad to work with the Permittee on bond calculations.

#### **Findings:**

The information provided in the proposed amendment 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**:

**Cut and Fill Material:** The bond calculations must show where cut material will be placed and where fill material will come from.

**Distances and Grades:** The bond calculations must show the haul distances and grades for all earthwork.

**Equipment and Productivity:** The equipment types and productivity must be included in the bond calculations. The productivity calculations are usually based on information from the *Caterpillar Handbook*. The Division does not usually use *Means* for earthwork calculations, as was done in the original bond calculations.

**Demolition:** The Division needs the volume of each structure, the building materials used, the volume of the floors, footings and foundations, and where the debris will be disposed. The Division uses *Means* to calculate demolition costs.

**Revegetation:** The Permittee must give the Division a detailed estimate of revegetation costs. Those costs must include, soil preparation, seeding, transplants, and fertilizer. The Division uses *Means* for most revegetation costs.

**Recommendations:**

The Permittee should be required to submit the information on the reclamation cost estimates in the form that the Division uses to calculate reclamation bonds.